

**DEPARTMENT OF HOMELAND SECURITY  
U.S. COAST GUARD DRAFT ENVIRONMENTAL IMPACT STATEMENT**

**FOR**

**PROPOSED NEW BRIDGE ACROSS THE MANATEE RIVER, MILE 15.0,  
AT PARRISH, MANATEE COUNTY, FLORIDA**

**APPENDIX E**

**BIOLOGICAL  
ASSESSMENT**

**JUNE 2013**

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# *Section 1.0*

## *INTRODUCTION*

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Manatee County (the County) has prepared a Draft Environmental Impact Statement (DEIS), in conjunction with the United States Coast Guard (USCG), to document a study of proposed improvements to north/south traffic movements in eastern Manatee County, Florida and to evaluate the potential impacts associated with those improvements. The objective of this transportation study is to identify the type, conceptual design, and location of improvements necessary to provide additional capacity for the projected north/south travel demand. The DEIS has been developed to satisfy the requirements of the *National Environmental Policy Act of 1969* (NEPA) and other related federal and state laws, rules, and regulations that apply to the Proposed Action.

For the purpose of the DEIS, two build alternatives are being evaluated. **Figure 1** shows the location, study areas, and construction limits of these alternatives. The study area of each alternative is defined as the area contained within a 0.5-mile buffer of the centerline. The two build alternatives are described below.

- **Fort Hamer Alternative** – This build alternative consists of a new two-lane bridge crossing the Manatee River connecting the existing two-lane Upper Manatee River Road with the existing two-lane Fort Hamer Road. The construction limits of this alternative begin just north of the main entrance of the Waterlefe subdivision and terminate on the north side of the Manatee River approximately 2,000 feet south of Mulholland Drive, a total of approximately 1.4 miles. The study area for this alternative extends south to State Road (SR) 64 and north to U.S. Highway (US) 301 because of the increased traffic between these points that would result from this alternative.
- **Rye Road Alternative** – This build alternative consists of a new two-lane crossing the Manatee River adjacent to the existing Rye Road Bridge and the expansion of Rye Road from two to four lanes from SR 64 north to Golf Course Road, Golf Course Road from two to four lanes from Rye Road to Fort Hamer Road, and Fort Hamer Road from two to four lanes from Golf Course Road to US 301, a total of 10.2 miles.

A Biological Assessment (BA) is required as part of the DEIS due to the presence of listed species and designated critical habitat within the study area for each build alternative. This BA describes the habitats and listed species potentially present within each build alternative and the effects that implementation of each build alternative would have on listed species and critical habitat.



**FIGURE 1  
LOCATION MAP – FORT HAMER AND RYE ROAD ALTERNATIVES**



## **1.1 PROJECT NEED**

Manatee County is proposing to add additional travel lanes across the Manatee River in eastern Manatee County. The purpose of the Proposed Action is to improve regional mobility by providing an alternative north/south transportation route between high-growth areas of Manatee County located east of Interstate 75 (I-75) and separated by the Manatee River. Studies have shown that there is a strong demand for multiple crossings over this waterway to alleviate the traffic burden on I-75. Several specific factors demonstrate the need for the Proposed Action, including:

- Accommodate existing and projected growth in eastern Manatee County,
- Improve the Level of Service (LOS) of the local roadway network,
- Improve emergency response times, and
- Improve evacuation capacity across the Manatee River.

The current river crossings located at I-75 and Rye Road create a circuitous route in eastern Manatee County that increases travel time/distance, reduces LOS, increases emergency response times, and are at capacity for evacuation scenarios.

## **1.2 ALTERNATIVES CONSIDERED**

The Proposed Action is intended to service the demand for two additional lanes of capacity across the Manatee River east of I-75 and the other elements of the Purpose and Need statement noted in Section 1 of the DEIS. East of I-75, opportunities exist where existing roadways can be connected with a new crossing (Fort Hamer Alternative) or an existing bridge and roadway can be expanded (Rye Road Alternative). Other alternatives were considered preliminarily, but were discounted due to their obvious impacts to the natural and human environment or failure to meet the project's Purpose and Need.

For example, new crossing locations between I-75 and Fort Hamer Road would require not only a new crossing of the Manatee River, but miles of new roadway traversing established and growing residential developments, thus, displacing hundreds of residents. Natural environment impacts in this area were also obviously greater than those utilizing existing transportation corridors. A crossing location between Fort Hamer Road and Rye Road had similar issues related to residential developments, but substantially greater natural environment impacts due to the curvilinear nature of this section of the Manatee River, width of the 100-year floodplain, and habitats found along the river. For these reasons, alternatives that either did not utilize or expand existing transportation corridors were considered to be unreasonable and were not carried forward in the DEIS for further analysis.

Within the Fort Hamer Alternative, three bridge concept alternatives were evaluated:

- Bascule Concept
  - Single leaf bascule (moveable) bridge with a 10-foot vertical clearance
- Mid-Level Fixed Concept
  - Fixed span bridge with a 26-foot vertical clearance
- High-Level Fixed Concept
  - Fixed span bridge with a 40-foot vertical clearance

A vessel survey was conducted during the Memorial Day weekend 1999 to determine vessel type, size, and usage along this portion of the Manatee River. At the time it was determined that a vertical clearance (air draft) of 26 feet would accommodate all vessels in this portion of the Manatee River. These results were presented to the USCG and a vertical clearance of 26 feet was found acceptable.

Due to the length of time since that survey was conducted, a second vessel survey was conducted in spring 2011. All property owners with water access between Fort Hamer Road and Rye Road were identified using the Manatee County Property Appraisers Office database and mailed a questionnaire. Based on the response of that survey, three respondents noted they had vessels that exceeded 26 feet in height. A subsequent field review in December 2011 indicated that one of these vessels (a small sailboat) was sunk in place at the owner's dock. The second vessel consisted of a houseboat with a flagpole that exceeded 26 feet in height; however, it was noted that the houseboat required less than 26 feet vertical clearance if the flagpole was lowered. The third vessel was a sailboat with a permanently mounted mast exceeding 26 feet in height. The results of both vessel surveys are provided in Appendix A of the DEIS.

Based on the estimated total lifetime cost (construction, maintenance, and operations) of the Bascule Bridge Concept (\$106,142,880 - \$111,083,600) and the very low number of vessels needing unlimited vertical clearance, it was recommended the Bascule Bridge Concept for the Fort Hamer Alternative be eliminated for further consideration.

The bridge height is the basis for the controversy related to the Waterlefe subdivision located immediately southwest of the proposed Fort Hamer Alternative crossing. The High-Level Fixed Bridge would increase the vertical clearance to 40 feet and be contradictory to the issues raised by that community. Additionally, because of the estimated total lifetime cost (construction, maintenance, and operations) of the High-Level Fixed Bridge Concept (\$14,906,580 - \$26,016,350) and the very low number of vessels needing a 40-foot vertical clearance, it was recommended the High-Level Fixed Bridge Concept for the Fort Hamer Alternative be eliminated for further consideration.

### ***1.3 ALTERNATIVES RECOMMENDED FOR FURTHER EVALUATION***

As a result of the preliminary evaluation of alternatives discussed above, it was determined that three alternatives would be considered "reasonable" for further, detailed analysis and evaluation in the DEIS:

- No-Build Alternative,
- Fort Hamer Alternative, and
- Rye Road Alternative.

The No-Build Alternative does not include any road capacity improvements other than the road safety improvements and scheduled maintenance already funded to be constructed in the Manatee County Capital Improvement Program (CIP), or improvements provided by private nongovernment entities, such as developers. For comparative purposes, the No-Build Alternative was retained and evaluated against the two build alternatives throughout the EIS process. The

results of the No-Build Alternative analyses are presented in Chapter 2 of the DEIS. This BA only addresses the two build alternatives.

The Fort Hamer Alternative consists of a new two-lane bridge crossing the Manatee River connecting the existing two-lane Upper Manatee River Road with the existing two-lane Fort Hamer Road. The construction limits of this alternative extend from just north of the main entrance of the Waterlefe subdivision to the north side of the Manatee River, a total of approximately 1.4 miles. The length of the proposed bridge is approximately 2,570 feet. A conceptual plan view of the bridge, bridge approaches, and stormwater/floodplain features are shown on **Figure 2**. The proposed roadway and bridge typical sections for the Fort Hamer Alternative are shown in **Figure 3**.

The Rye Road Alternative consists of a new two-lane, 350-foot-long bridge crossing the Manatee River parallel to the existing Rye Road Bridge. To accommodate the two new lanes over the river, this alternative also includes the expansion of Rye Road from two to four lanes from SR 64 north to Golf Course Road, Golf Course Road from two to four lanes from Rye Road to Fort Hamer Road, and Fort Hamer Road from two to four lanes from Golf Course Road to US 301, a total of approximately 10.2 miles. Unlike the Fort Hamer Alternative, conceptual locations of the stormwater/floodplain compensation ponds have not been developed for the Rye Road Alternative since this alternative has not been advanced to preliminary design. The proposed roadway and bridge typical sections for the Rye Road Alternative are shown in **Figure 4**.

## ***1.4 PREFERRED ALTERNATIVE***

The analysis presented in Chapter 2 of the DEIS resulted in the determination that the No-Build Alternative does not meet the stated Purpose and Need. The analysis further showed the Rye Road Alternative only minimally improves the local roadway network LOS and only minimally accommodates planned and approved growth in the area. The Rye Road Alternative does not improve emergency response times. After consideration of each alternative's ability to meet the stated Purpose and Need and the social, cultural, natural environment, and physical impacts of the No-Build Alternative and the two build alternatives, **the Fort Hamer Alternative has been selected as the preferred alternative.**



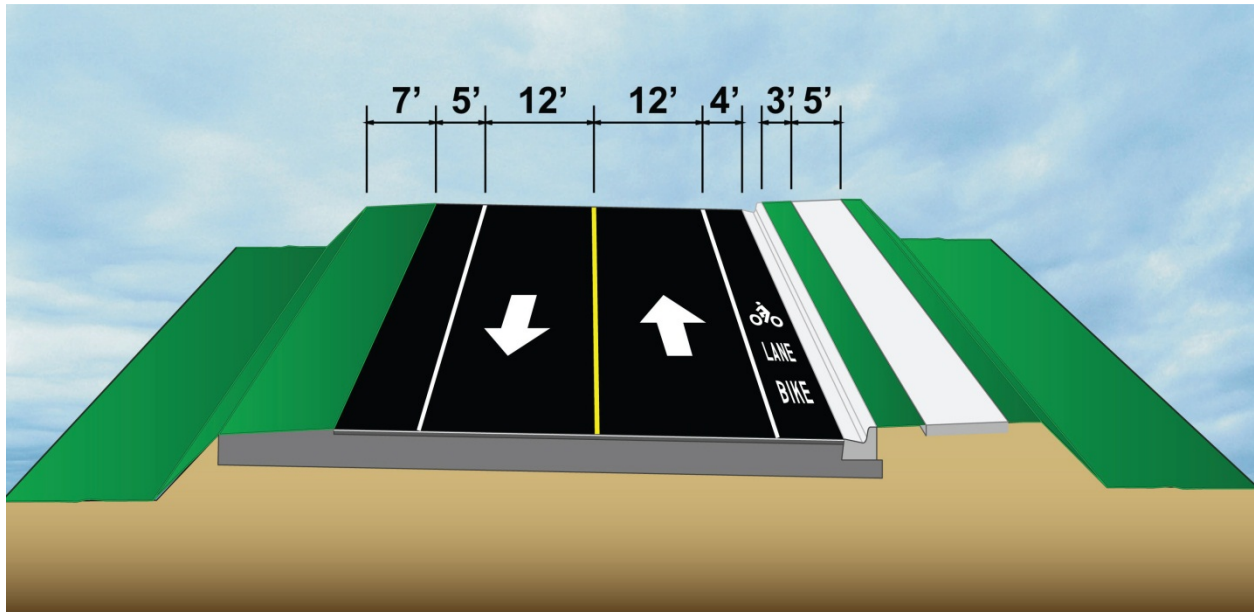


**FIGURE 2**  
**FORT HAMER ALTERNATIVE**  
**CONCEPTUAL PLAN VIEW OF**  
**BRIDGE AND APPROACHES**

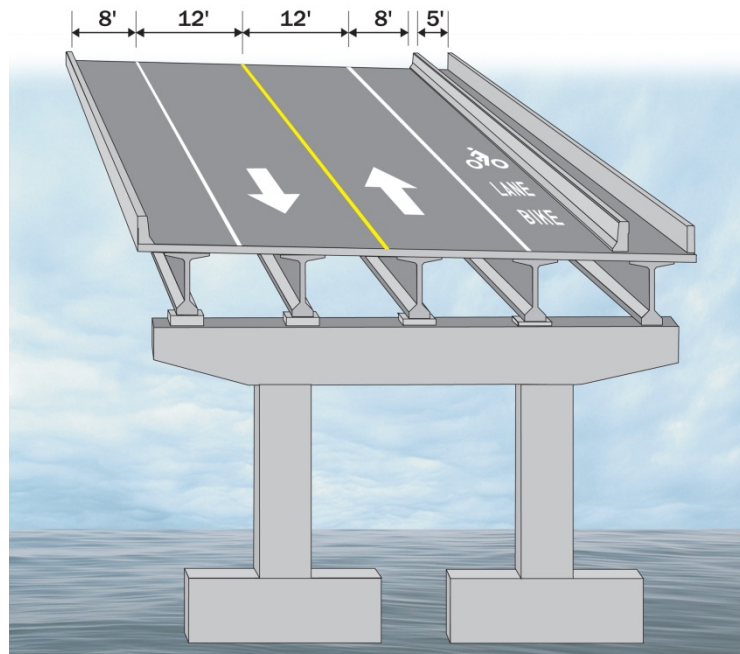


**FIGURE 3  
FORT HAMER ALTERNATIVE TYPICAL SECTIONS**

**ROADWAY TYPICAL SECTION**

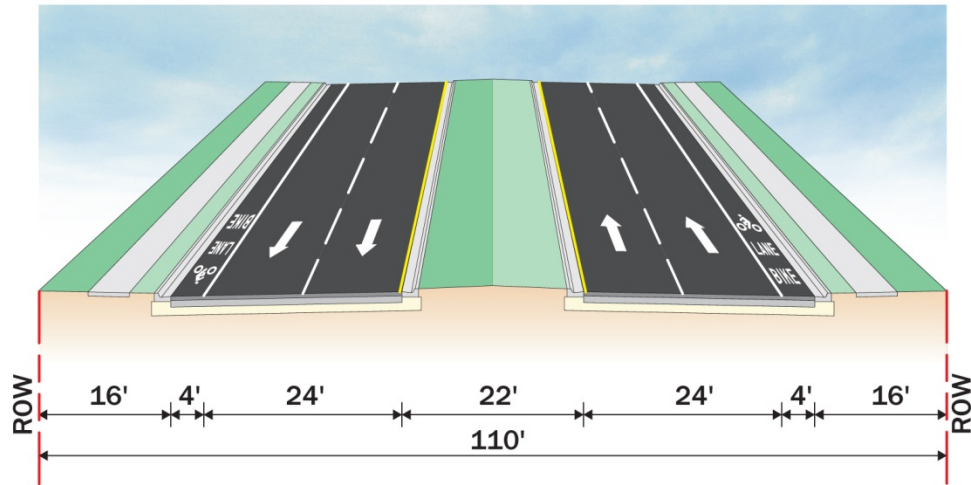


**BRIDGE TYPICAL SECTION**

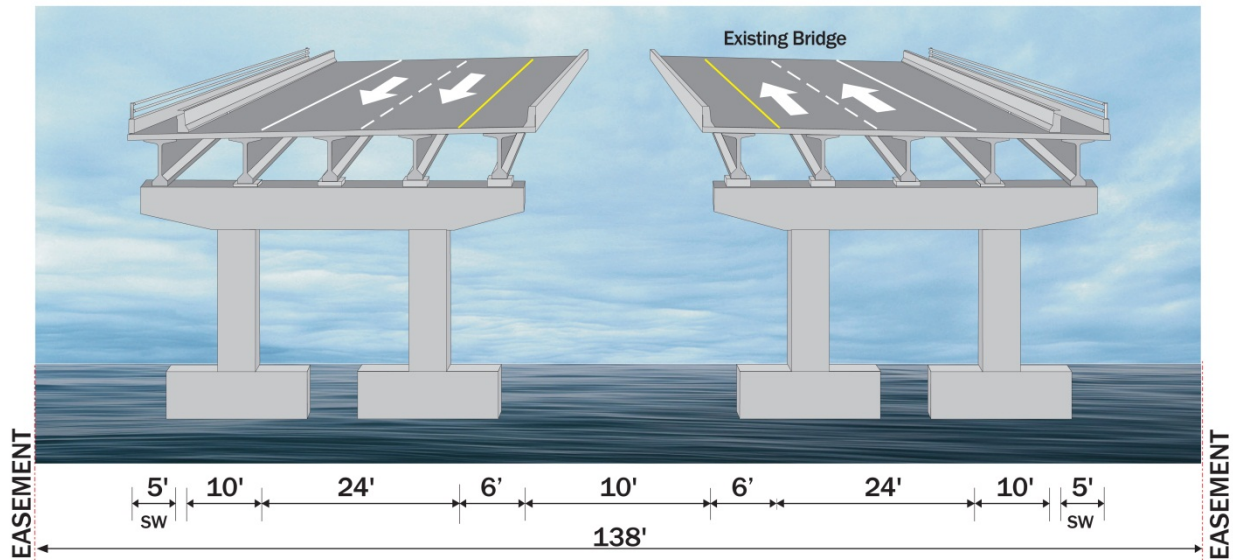


**FIGURE 4**  
**RYE ROAD ALTERNATIVE TYPICAL SECTIONS**

**ROADWAY TYPICAL SECTION**



**BRIDGE TYPICAL SECTION**



## ***Section 2.0***

# ***METHODOLOGY***

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This section describes the data collection and field review methodology for quantifying and describing the existing environmental conditions within the study area of each build alternative.

### ***2.1 DATA COLLECTION AND AGENCY COORDINATION***

Each study area was evaluated for potential occurrences of federally- and state-listed plant and animal species in accordance with Section 7 of the *Endangered Species Act of 1973*, as amended (ESA), and Chapters 5B-40 and 68A-27 Florida Administrative Code (F.A.C.). The evaluation included coordination with the U.S. Fish and Wildlife Service (FWS), the National Marine Fisheries Service (NMFS), and the Florida Fish and Wildlife Conservation Commission (FWC).

Agency coordination of the project was initiated on July 9, 2010 with the publication of the Notice of Intent (NOI) to prepare an EIS in the Federal Register (2010). On July 10, 2010 the USCG invited the FWS and NMFS to participate as cooperating agencies for the EIS. Both the FWS and NMFS declined to be a cooperating agency. In addition, letters were sent to the FWS, FWC, and Florida Natural Areas Inventory (FNAI) requesting information on documented occurrences of listed species within 1 mile of each build alternative and wood stork rookeries located within 15 miles of each build alternative. Copies of all correspondence with federal and state agencies and FNAI are included in Appendix A.

The evaluation also included literature searches and field reviews to identify habitats and the potential occurrence of listed species and any designated critical habitat located within each build alternative. The reviews and database searches included the following:

- High resolution orthorectified color aerial imagery (FDOT, 2011);
- U.S. Geological Survey (USGS) 7.5 minute Topographical Quadrangle Map, Parrish, FL, 1973 (Photo revised 1987) (USGS, 1987), Rye, FL (USGS, 1979), and Lorraine, FL, (USGS, 2009);
- Florida Land Use, Cover and Forms Classification System (FLUCFCS) Geographic Information System (GIS) Database (SWFWMD, 2009);
- Florida Department of Transportation (FDOT), *Florida Land Use, Cover and Forms Classification System Handbook* (FLUCFCS) 3<sup>rd</sup> Edition (FDOT, 1999);
- FWS, *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, et al., 1979);



- FWS, *Endangered and Threatened Wildlife and Plants*, 50 Code of Federal Regulations (CFR) 17.11 and 17.12;
- FNAI maps and database, <http://www.fnai.org/bioticssearch.cfm>. (FNAI, 2012a);
- FWC, Eagle Nest Locator website, <https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx>. (FWC, 2011);
- GIS wood stork data for active colonies (FWS, 2010a);
- Florida's Endangered and Threatened Species (FWC, 2009);
- Notes on Florida's Endangered and Threatened Plants: Botany Contribution No. 38, 4th edition (FDACS, 2003); and
- NatureServe Explorer maps and database, Updated *Mon Jun 21 14:43:31 2010 UTC*. <http://www.natureserve.org/explorer/>. (NatureServe, 2010).

## 2.2 ***FIELD REVIEWS***

Prior to field reviews, the approximate boundaries of upland and wetland communities within each build alternative's study area were mapped on true color aerial photographs. Environmental scientists familiar with Florida natural communities conducted field reviews within the limits of the Fort Hamer Alternative in April, May, June, and December 2010 to verify upland and wetland community boundaries. Field reviews of the Rye Road Alternative were conducted in February and March 2011. During the field reviews, each vegetative community type identified within each alternative was visually inspected to document community boundaries, dominant vegetation, and to assess the potential occurrence of listed species.

All vegetative cover/land use types within the limits of both alternatives were classified using the FLUCFCS (FDOT, 1999; SWFWMD, 2009). In addition to FLUCFCS, wetland communities were also classified using the FWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin, *et. al.*, 1979). Wetland boundaries within each alternative were approximated using Chapter 62-340, F.A.C., *Delineation of the Landward Extent of Wetlands and Surface Waters*, and the criteria found within the U.S. Army Corps of Engineers (USACE) 2010 *Regional Supplement to the USACE Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region* (Version 2.0) (ERDC/EL TR-10-20) (USACE, 2010).

## *Section 3.0*

# ***ENVIRONMENTAL CHARACTERISTICS OF THE STUDY AREAS***

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This section describes the land use/vegetative communities present within the study areas of the Fort Hamer and Rye Road Alternatives. Appendices B and C provide maps of the land use/vegetative communities within the Fort Hamer Alternative Study Area and the Rye Road Alternative Study Area, respectively.

### ***3.1 FORT HAMER ALTERNATIVE***

The study area for the Fort Hamer Alternative is located in west-central Manatee County along the Manatee River. I-75 and the developed urban areas of Bradenton and Palmetto lie west of the study area, while predominantly rural areas occur east of the study area. The Fort Hamer Alternative Study Area and surrounding areas have experienced considerable growth and development within the past decade. During this time, residential subdivisions and golf course amenities have been constructed within and immediately adjacent to the study area; however, much of the study area remains in agriculture, forested uplands, open land, and surface waters (including wetlands).

#### ***3.1.1 UPLANDS***

As shown in **Table 1**, uplands account for 74.3 percent of the Fort Hamer Alternative Study Area. Of this percentage, developed lands (including residential areas, golf courses, and roadways) make up the largest area (42.8 percent), followed by agriculture (25.5 percent). Undeveloped non-agricultural and forested upland areas account for only 6.0 percent of the Fort Hamer Alternative Study Area. Upland forested areas within the study area generally consist of small remnant patches of shrub and brushland, Brazilian pepper (*Schinus terebinthifolius*), live oak (*Quercus virginiana*), cabbage palm (*Sabal palmetto*), and hardwood conifer mixed.

**TABLE 1**  
**LAND USE/VEGETATIVE COVER TYPES WITHIN**  
**THE FORT HAMER ALTERNATIVE STUDY AREA**

	<b>FLUCFCS Classification<sup>1</sup></b>	<b>FWS Classification<sup>2</sup></b>	<b>Description</b>	<b>Acres</b>	<b>Total Acres</b>	<b>Percent of Study Area</b>
<b>Uplands</b>						
Developed Lands	110	N/A	Residential – Low Density	605.5		
	120	N/A	Residential – Medium Density	741.2		
	130	N/A	Residential – High Density	119.4		
	140	N/A	Commercial and Services	73.9		
	150	N/A	Industrial	0.1		
	170	N/A	Institutional	50.3		
	182	N/A	Golf Courses	196.8		
	185	N/A	Parks	5.2		
	740	N/A	Disturbed Land	25.0		
	814	N/A	Roads and Highways	34.4		
	830	N/A	Utilities	8.2		
<b>Total Developed Lands</b>					<b>1,860.0</b>	<b>42.8</b>
Agriculture	210	N/A	Cropland and Pastureland	828.8		
	214	N/A	ROW Crops	26.8		
	220	N/A	Tree Crops	6.3		
	230	N/A	Feeding Operations	43.7		
	240	N/A	Nurseries and Vineyards	65.5		
	250	N/A	Specialty Farms	5.6		
	261	N/A	Fallow Cropland	131.5		
<b>Total Agriculture</b>					<b>1,108.2</b>	<b>25.5</b>
Open Lands	190	N/A	Open Land	157.4		
<b>Total Open Lands</b>					<b>157.4</b>	<b>3.6</b>
Forested Lands	320	N/A	Shrub and Brushland	38.6		
	410	N/A	Upland Coniferous Forest	11.8		
	411	N/A	Pine Flatwoods	15.5		
	422	N/A	Brazilian Pepper	2.9		
	427	N/A	Live Oak	6.5		
	428	N/A	Cabbage Palm	0.3		
	434	N/A	Hardwood Conifer Mixed	29.5		
<b>Total Forested Lands</b>					<b>105.1</b>	<b>2.4</b>
<b>Total Uplands</b>					<b>3,230.7</b>	<b>74.3</b>
<b>Surface Waters</b>						
Freshwater Lakes and Reservoirs	530	POWHx	Ponds, Reservoirs (includes stormwater ponds)	228.8		
<b>Total Freshwater Lakes and Reservoirs</b>					<b>228.8</b>	<b>5.3</b>

*Continued on next page*

**TABLE 1 (CONTINUED)**  
**LAND USE/VEGETATIVE COVER TYPES WITHIN**  
**THE FORT HAMER ROAD ALTERNATIVE STUDY AREA**

	<b>FLUCFCS Classification<sup>1</sup></b>	<b>FWS Classification<sup>2</sup></b>	<b>Description</b>	<b>Acres</b>	<b>Total Acres</b>	<b>Percent of Study Area</b>
Drainage Ditches	510	PEM2Jx	Creeks and Upland-Cut Drainage Ditches	17.5		
<b>Total Freshwater Ditches</b>					<b>17.5</b>	<b>0.4</b>
Freshwater Wetlands	615	PFO1P	Stream and Lake Swamps (Bottomland)	272.7		
	617	PFO1C	Mixed Wetland Hardwoods	17.0		
	619	PFO3Y	Exotic Wetland Hardwoods	1.1		
	630	PFO6/7E	Wetland Forested Mixed	176.0		
	631	PSS1C	Wetland Shrub	1.7		
	641	PEM1E	Freshwater Marshes	121.8		
	643	PEM2B	Wet Prairies	21.6		
	644	PEM1H	Emergent Aquatic Vegetation	9.6		
<b>Total Freshwater Wetlands</b>					<b>621.5</b>	<b>14.3</b>
Estuarine Streams	510	E1UB2L & E1UB2N	Streams and Waterways (including rivers)	123.5		
<b>Total Estuarine Streams</b>					<b>123.5</b>	<b>2.8</b>
Estuarine Wetlands	612	E2SS3N	Mangrove Swamps	11.7		
	631	E2SS3A	Wetland Shrub	0.6		
	642	E2EM1N & E2EM1P	Saltwater Marshes	113.2		
<b>Total Estuarine Wetlands</b>					<b>125.5</b>	<b>2.9</b>
<b>Total Surface Waters</b>					<b>1,116.8</b>	<b>25.7</b>
<b>Total Land Use/Vegetative Cover</b>					<b>4,347.5</b>	<b>100.0</b>

<sup>1</sup> FDOT, 1999.

<sup>2</sup> Cowardin, *et al.*, 1979.

### **3.1.2 SURFACE WATERS**

As shown in Table 1, wetlands and other surface waters account for 25.7 percent of the Fort Hamer Alternative Study Area. The Fort Hamer Alternative Study Area is bisected by the Manatee River, which has a relatively slow current and is tidally influenced at this location. The mean high water and mean low water elevations of the river at the Fort Hamer Park boat ramp are +0.53 feet and -1.21 feet NAVD 88 (North American Vertical Datum), respectively. Large expanses of salt marsh, dominated by black needlerush (*Juncus roemerianus*), occur on both sides of the main channel. These marshes are interspersed with long, narrow depositional formations supporting mangroves, stream swamps, and mixed wetland forested habitats.

Within the study area, natural wetland systems north of the river include a large freshwater marsh on the west side of Fort Hamer Road and a large stream swamp east of Fort Hamer Road. The freshwater marsh is ringed by a narrow band of mixed wetland hardwoods which, in turn, are surrounded by residential developments and stormwater ponds. These wetlands drain south through the large freshwater marsh and eventually to the Manatee River via a small creek located along the western boundary of Fort Hamer Park. The stream swamp east of Fort Hamer Road is bordered by a residential development to the north and vacant land (former agricultural fields) to the south. This swamp drains east to Gamble Creek, a large tributary to the Manatee River.

Few natural wetland systems remain on the south side of the Manatee River within the study area. Narrow, mixed forested wetlands that drain to the Manatee River are located within the Waterlefe subdivision adjacent to the river and in a low-density residential area on both sides of Upper Manatee River Road. Several other small, isolated wetlands are scattered throughout the study area south of the river. Numerous excavated stormwater ponds and golf course ponds are located throughout the western half of the study area on both sides of the river.

## **3.2 RYE ROAD ALTERNATIVE**

The Rye Road Alternative Study Area is located east of the Fort Hamer Alternative and west of the Manatee River dam. Compared to the Fort Hamer Alternative Study Area, the Rye Road Alternative Study Area is more rural with the largest single land use consisting of agriculture. Other rural habitats within this study area consist of forested uplands, open land, and surface waters (including wetlands). Along the Fort Hamer Road portion of the study area, low density residences are present along with some improved pasture. Along the western portion of Golf Course Road, a subdivision has been built west of Spencer Parrish Road. Between Gamble Creek Road and Jim Davis Road, a golf course and associated buildings are located on the north side of Golf Course Road. Along the eastern portion of Golf Course Road, more residences are present among large areas of forested uplands and agriculture habitats. Rural areas are most prominent in the northern and central portions of Rye Road. Commercial and residential areas occur along the southern portion of Rye Road.

### **3.2.1 UPLANDS**

As shown in **Table 2**, uplands account for 79.8 percent of the Rye Road Alternative Study Area. Of this percentage, agriculture lands make up the largest area (32.0 percent). Developed lands (including residential areas, golf courses, parks, and roadways) make up 28.4 percent of the study area. Undeveloped uplands, including open land (non-agricultural), shrub and brushland, and forested areas account for 19.4 percent of the study area.

**TABLE 2**  
**LAND USE/VEGETATIVE COVER TYPES WITHIN THE RYE ROAD ALTERNATIVE STUDY AREA**

	<b>FLUCFCS Classification<sup>1</sup></b>	<b>FWS Classification<sup>2</sup></b>	<b>Description</b>	<b>Acres</b>	<b>Total Acres</b>	<b>Percent of Study Area</b>
<b>Uplands</b>						
Developed Lands	110	N/A	Residential – Low Density	788.8		
	120	N/A	Residential – Medium Density	846.7		
	129	N/A	Medium Density Under Construction	72.6		
	140	N/A	Commercial and Services	52.3		
	142	N/A	Wholesale Sales and Services	0.5		
	143	N/A	Professional Services	2.3		
	148	N/A	Cemeteries	3.8		
	170	N/A	Institutional	7.0		
	171	N/A	Educational Facilities	12.5		
	175	N/A	Governmental	6.3		
	182	N/A	Golf Courses	164.0		
	740	N/A	Disturbed Land	1.5		
	814	N/A	Roads and Highways	155.0		
	833	N/A	Water Supply Plant	0.9		
	834	N/A	Sewage Treatment	0.3		
<b>Total Developed Lands</b>					<b>2,114.2</b>	<b>28.4</b>
Agriculture	210	N/A	Cropland and Pastureland	503.7		
	211	N/A	Improved Pasture	1065.7		
	212	N/A	Unimproved Pasture	41.5		
	220	N/A	Tree Crops	66.6		
	221	N/A	Citrus Groves	92.7		
	224	N/A	Abandoned Groves	108.0		
	240	N/A	Nurseries and Vineyards	31.1		
	241	N/A	Tree Nursery	7.8		
	242	N/A	Sod Farms	316.8		
	250	N/A	Specialty Farms	4.4		
	260	N/A	Other Open Lands (Rural)	139.9		
<b>Total Agriculture</b>					<b>2,378.1</b>	<b>32.0</b>
Open Lands	190	N/A	Open Land	354.5		
	193	N/A	Urban Land in Transition without positive indicators of intended activity	3.6		
<b>Total Open Lands</b>					<b>358.1</b>	<b>4.8</b>
Forested Lands	320	N/A	Shrub and Brushland	307.0		
	321	N/A	Palmetto Prairies	63.3		
	410	N/A	Upland Coniferous Forests	14.9		

*Continued on next page*

**TABLE 2 (CONTINUED)**  
**LAND USE/VEGETATIVE COVER TYPES WITHIN THE RYE ROAD ALTERNATIVE STUDY AREA**

	<b>FLUCFCS Classification<sup>1</sup></b>	<b>FWS Classification<sup>2</sup></b>	<b>Description</b>	<b>Acres</b>	<b>Total Acres</b>	<b>Percent of Study Area</b>
	411	N/A	Pine Flatwoods	83.6		
Forested Lands (continued)	412	N/A	Longleaf Pine-Xeric Oak	118.4		
	413	N/A	Sand Pine	110.6		
	422	N/A	Brazilian Pepper	0.5		
	427	N/A	Live Oak	63.0		
	434	N/A	Hardwood-Conifer Mixed	303.9		
	436	N/A	Upland Scrub, Pine and Hardwoods	15.4		
	438	N/A	Mixed Hardwoods	2.05		
<b>Total Forested Lands</b>					<b>1,082.6</b>	<b>14.6</b>
<b>Total Uplands</b>					<b>5,933.0</b>	<b>79.8</b>
<b>Surface Waters</b>						
Freshwater Lakes and Reservoirs	520	POWH	Lakes	0.2		
	530	POWHx	Reservoirs (includes stormwater ponds)	172.4		
	534	POWHx	Reservoirs less than 10 acres	13.2		
<b>Total Freshwater Lakes and Reservoirs</b>					<b>185.7</b>	<b>2.5</b>
Drainage Ditches	510	PUB2Jx/PEM1 Jx/R2UB2	Upland-Cut Drainage Ditches/Channelized Creeks	31.0		
<b>Total Freshwater Ditches</b>					<b>31.0</b>	<b>0.4</b>
Freshwater Streams	510	R2UB2	Streams and Waterways (including rivers)	28.7		
<b>Total Freshwater Streams</b>					<b>28.7</b>	<b>0.4</b>
Freshwater Wetlands	615	PFO1P	Stream and Lake Swamps (Bottomland)	814.4		
	617	PFO1C	Mixed Wetland Hardwoods	12.9		
	618	PSS1C	Willow and Elderberry	2.8		
	621	PFO2C	Cypress	7.9		
	630	PFO1C	Wetland Forested Mixed	133.9		
	641	PEM1C	Freshwater Marshes	169.8		
	643	PEM1C	Wet Prairies	102.3		
	644	PAB3	Emergent Aquatic Vegetation	8.2		
	653	PUB2	Intermittent Ponds	0.9		
<b>Total Freshwater Wetlands</b>					<b>1,252.9</b>	<b>16.9</b>
<b>Total Surface Waters</b>					<b>1,498.3</b>	<b>20.2</b>
<b>Total Land Use/Vegetative Cover</b>					<b>7,431.3</b>	<b>100.0</b>

<sup>1</sup> FDOT, 1999.

<sup>2</sup> Cowardin, *et al.*, 1979.

Within the Rye Road Alternative Study Area, the Rye Preserve occupies 145 acres on both sides of Rye Road where it crosses the Manatee River. Portions of this park were originally acquired in 1986 with a grant from the National Park Service (NPS) Land and Water Conservation Fund (LWCF). At that time, the recreation area located north of the Manatee River and east of Rye Road was named “Rye Wilderness Park.” Manatee County has since expanded the recreation area and renamed the facility “Rye Preserve.” The Preserve features hiking trails, horseback trails, picnic areas, playground, and a canoe/kayak launch, in addition to camping and fishing opportunities.

### **3.2.2 SURFACE WATERS**

Rye Road crosses the Manatee River immediately north of its intersection with Upper Manatee River Road. At this location, the river is relatively narrow (approximately 73 feet wide) and shallow with a moderately swift current. Streams and lake swamps (bottomland) surround each side of this river crossing and consist predominately of red maple (*Acer rubrum*), sweetbay (*Magnolia virginiana*), laurel oak (*Quercus laurifolia*), swamp dogwood (*Cornus foemina*), water oak (*Quercus nigra*), pop ash (*Fraxinus caroliniana*), and cabbage palm.

Golf Course Road crosses Gamble Creek approximately 900 feet east of Jim Davis Road. Gamble Creek flows north to south into the Manatee River. At this crossing, this channelized stream has a moderately swift current and shallow water depth. Adjacent land use types consist of abandoned citrus groves, improved pasture, and upland live oak forests.

Natural wetland systems within the Rye Road Alternative Study Area include several channelized creeks surrounded by forested wetlands. Dominant vegetation within these forested wetlands consists of red maple, laurel oak, cabbage palm, and sweetbay. These forested floodplain forests are bordered by either residential areas and/or agriculture fields. All eventually flow to the Manatee River either directly or via connected creeks.

In the southern portion of the study area, isolated freshwater marshes are dominated by torpedo grass (*Panicum repens*), pickerelweed (*Pontederia cordata*), and primrose willow (*Ludwigia peruviana*).

Throughout the Rye Road Alternative Study Area, several isolated reservoirs are present that serve as either livestock ponds, water management facilities for residential subdivisions/golf courses, or have been excavated by private landowners.

Freshwater wetlands and other surface waters make up 20.2 percent of the Rye Road Alternative Study Area.



## *Section 4.0*

# ***LISTED SPECIES WITHIN THE PROJECT ALTERNATIVES***

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The assessment of the potential presence of listed species within each build alternative began with a review of all listed species previously documented in Manatee County. **Table 3** provides a summary table of all the federally- and state-listed plant and animal species documented in Manatee County, their federal and state status, their habitat preferences, whether suitable habitat for the species is present in the build alternatives, and whether the species has been documented in the study area of the alternatives. The assessment of the potential presence of listed species within the two build alternatives was based on the following criteria:

- Geographic range of each species. Species accounts of each species were reviewed to assess whether its historic or current documented range overlapped the study areas.
- Presence of suitable habitat. The habitat requirements of each species were reviewed and compared against the results of the habitat mapping of the study areas. Consideration was given to nesting, denning, and foraging habitat requirements for each species.
- Documented occurrences. The known presence of species within the study areas was documented based on the FNAI Element Occurrence Report (contained in Appendix A), agency correspondence, and field observations.

As a result of this assessment, each species in Table 3 was considered to either have or not have the potential to occur within the two build alternatives study areas. The following subsections describe only the listed species with a potential to occur within the Fort Hamer Alternative or Rye Road Alternative study areas.

## ***4.1 PLANTS***

### **Golden Leather Fern**

The golden leather fern (*Acrostichum aureum*) is state-listed as threatened by the FDACS. It is a member of the maidenhair fern (*Pteridaceae*) family and occurs in tropical hardwood hammocks, freshwater marshes, and estuarine wetlands. The golden leather fern is similar to the common leather fern (*A. danaeifolium*) except that the golden leather fern has fewer pairs of pinnae that do not typically overlap.

**TABLE 3**  
**LISTED SPECIES<sup>1</sup> DOCUMENTED IN MANATEE COUNTY AND**  
**THEIR POTENTIAL TO OCCUR IN THE FORT HAMER AND RYE ROAD ALTERNATIVES STUDY AREAS**

Scientific Name	Common Name	Federal Status <sup>2</sup>	State Status <sup>3</sup>	Habitat	Habitat Available in Study Area?		Species Documented in Study Area? <sup>4</sup>	
					FH	RR	FH	RR
Plants								
<i>Acrostichum aureum</i>	Golden leather fern	NL	T	Brackish and freshwater marshes.	Yes	No	No	No
<i>Bonamia grandiflora</i>	Florida bonamia	T	E	Scrub and sandhill.	No	No	No	No
<i>Calopogon multiflorus</i>	Many-flowered grass pink	NL	E	Wet prairies and savannahs.	Yes	No	No	No
<i>Chrysopsis floridana</i>	Florida goldenaster	E	E	Scrub and sandhill.	No	Yes	No	No
<i>Cladonia perforata</i>	Perforate reindeer lichen	E	E	Sand pine and rosemary scrub.	No	No	No	No
<i>Eragrostis pectinacea</i> var. <i>tracyi</i>	Sanibel lovegrass	NL	E	Disturbed sites such as roadsides, railroad embankments, gardens, and cultivated fields.	Yes	Yes	No	No
<i>Glandularia (Verbena) tampensis</i>	Tampa vervain	NL	E	Live oak–cabbage palm hammocks and pine–palmetto flatwoods.	Yes	Yes	No	No
<i>Gossypium hirsutum</i>	Wild cotton	NL	E	Disturbed sites such as roadsides, railroad embankments, gardens, and cultivated fields.	Yes	Yes	No	No
<i>Lechea cernua</i>	Nodding pinweed	NL	T	Deep sands/ancient dunes under mature scattered pine or oak, but is more frequently in sandy openings.	No	No	No	No
<i>Matelea floridana</i>	Florida spiny-pod	NL	E	Upland hardwood forests.	Yes	Yes	No	No
<i>Pteroglossaspis (Eulphoria) ecristata</i>	Giant orchid	NL	T	Sandy pinelands and fields.	Yes	Yes	No	No
<i>Rhynchospora megaplumosa</i>	Large-plumed beaksedge	NL	E	Sands and sandy peats of pine flatwoods scrub and flatwoods-sand-scrub transition.	No	Yes	No	No
Fish								
<i>Rivulus marmoratus</i>	Mangrove rivulus	NL	SSC	Primarily coastal brackish and saltwater areas; usually collected from mangrove or high salt marsh habitats.	Yes	No	No	No
Reptiles								
<i>Alligator mississippiensis</i>	American alligator	T (S/A) <sup>5</sup>	F T(S/A)	Rivers, swamps, lake bayous, ponds, marshes.	Yes	Yes	Yes	Yes

*Continued on next page*

**TABLE 3 (CONTINUED)**  
**LISTED SPECIES<sup>1</sup> DOCUMENTED IN MANATEE COUNTY AND**  
**THEIR POTENTIAL TO OCCUR IN THE FORT HAMER AND RYE ROAD ALTERNATIVES STUDY AREAS**

Scientific Name	Common Name	Federal Status <sup>2</sup>	State Status <sup>3</sup>	Habitat	Habitat Available in Study Area?		Species Documented in Study Area? <sup>4</sup>	
					FH	RR	FH	RR
<i>Caretta caretta</i>	Loggerhead turtle	T	FT	Marine coastal and oceanic waters; nest on coastal sand beaches.	No	No	No	No
<i>Chelonia mydas</i>	Green turtle	E	FE	Marine coastal and oceanic waters; nest on coastal sand beaches.	No	No	No	No
<i>Dermochelys coriacea</i>	Leatherback turtle	E	FE	Marine coastal and oceanic waters; nest on coastal sand beaches.	No	No	No	No
<i>Drymarchon corais couperi</i>	Eastern indigo snake	T	FT	Mesic flatwoods, upland pine forest, sandhill scrub.	Yes	Yes	No	No
<i>Gopherus polyphemus</i>	Gopher tortoise	NL	T	Sandhill, scrubby flatwoods, xeric hammock.	Yes	Yes	No	No
<i>Lepidochelys kempii</i>	Kemp's Ridley turtle	E	FE	Marine coastal and oceanic waters; nest on coastal sand beaches.	No	No	No	No
<i>Pituophis melanoleucus mugitis</i>	Pine snake	NL	SSC	Sandhill, scrubby flatwoods, xeric hammock.	Yes	Yes	No	No
<b>Amphibians</b>								
<i>Rana capito</i>	Gopher frog	NL	SSC	Sandhill communities, sand pine scrub, xeric oak hammocks, dry prairies, pine flatwoods, and ruderal sites.	Yes	Yes	No	No
<b>Birds</b>								
<i>Aphelocoma coerulescens</i>	Florida scrub jay	T	FT	Fire-dominated, low-growing oak scrub on well-drained sandy soils.	No	Yes	No	Yes
<i>Aramus guaranauna</i>	Limpkin	NL	SSC	Mangroves, freshwater marshes, swamps, springs, ditches and swales, and pond and river margins.	Yes	Yes	No	No
<i>Athene cunicularia floridana</i>	Florida burrowing owl	NL	SSC	Very open areas such as prairies, sand hills, and farm land.	Yes	Yes	No	No
<i>Caracara cheriway</i>	Crested caracara	T	FT	Open grassland habitats and improved pastures with cabbage palms. Nesting generally occurs within cabbage palms.	Yes	Yes	No	No
<i>Charadrius nivosus</i>	Snowy plover	NL	T	Restricted to dry, sandy beaches, where they nest in shallow depressions, usually near some vegetation or debris.	No	No	No	No

*Continued on next page*

**TABLE 3 (CONTINUED)**  
**LISTED SPECIES<sup>1</sup> DOCUMENTED IN MANATEE COUNTY AND**  
**THEIR POTENTIAL TO OCCUR IN THE FORT HAMER AND RYE ROAD ALTERNATIVES STUDY AREAS**

Scientific Name	Common Name	Federal Status <sup>2</sup>	State Status <sup>3</sup>	Habitat	Habitat Available in Study Area?		Species Documented in Study Area? <sup>4</sup>	
					FH	RR	FH	RR
<i>Charadrius melodus</i>	Piping plover	T	FT	Found on open, sandy beaches and on tidal mudflats and sand flats along both coasts.	No	No	No	No
<i>Egretta caerulea</i>	Little blue heron	NL	SSC	Mangroves, freshwater marshes, swamps, springs and spring runs, swales, and pond and river margins.	Yes	Yes	Yes	Yes
<i>Egretta rufescens</i>	Reddish egret	NL	SSC	Mangroves, freshwater marshes, swamps, springs, ditches and swales, and pond and river margins.	Yes	Yes	No	No
<i>Egretta thula</i>	Snowy egret	NL	SSC	Mangroves, freshwater marshes, swamps, springs and spring runs, swales, and pond and river margins.	Yes	Yes	Yes	No
<i>Egretta tricolor</i>	Tricolored heron	NL	SSC	Mangroves, freshwater marshes, swamps, springs and spring runs, swales, and pond and river margins.	Yes	Yes	Yes	No
<i>Eudocimus albus</i>	White ibis	NL	SSC	Mangroves, freshwater marshes, swamps, springs and spring runs, swales, and pond and river margins.	Yes	Yes	Yes	Yes
<i>Falco sparverius paulus</i>	Southeastern American kestrel	NL	T	Open areas with long leaf pine, small turkey and live oaks.	Yes	Yes	No	No
<i>Grus canadensis pratensis</i>	Florida sandhill crane	NL	T	Dry prairies, freshwater marshes, and wet prairies.	Yes	Yes	Yes	Yes
<i>Haematopus palliatus</i>	American oystercatcher	NL	SSC	Large areas of beach, sandbar, mud flat, and shellfish beds for foraging. Sparsely vegetated, sandy areas for nesting, along with beach wrack and marsh grass.	No	No	No	No
<i>Haliaeetus leucocephalus</i>	Bald eagle <sup>6</sup>	NL	NL	Nests in tall trees- Forages near bodies of water.	Yes	Yes	No	No
<i>Mycteria americana</i>	Wood stork	E	FE	Nests in inundated forested wetlands- Forages in freshwater marshes, swamps, flooded pastures.	Yes	Yes	Yes	Yes
<i>Pelecanus occidentalis</i>	Brown pelican	NL	SSC	Mainly coastal, feeding in shallow estuarine waters, and (less often) far offshore.	Yes	No	Yes	No
<i>Platalea ajaja</i>	Roseate spoonbill	NL	SSC	Coastal mangrove islands, Brazilian pepper on man-made dredge spoil islands, shallow water of variable salinity, including marine tidal flats and ponds, coastal marshes, mangrove-dominated inlets and pools, and freshwater sloughs and marshes.	Yes	No	No	No

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**TABLE 3 (CONTINUED)**  
**LISTED SPECIES<sup>1</sup> DOCUMENTED IN MANATEE COUNTY AND**  
**THEIR POTENTIAL TO OCCUR IN THE FORT HAMER AND RYE ROAD ALTERNATIVES STUDY AREAS**

Scientific Name	Common Name	Federal Status <sup>2</sup>	State Status <sup>3</sup>	Habitat	Habitat Available in Study Area?		Species Documented in Study Area? <sup>4</sup>	
					FH	RR	FH	RR
<i>Rynchops niger</i>	Black skimmer	NL	SSC	Coastal waters, including beaches, bays, estuaries, sandbars, tidal creeks (foraging), and also inland waters of large lakes, phosphate pits, and flooded agricultural fields.	No	No	No	No
<i>Sterna antillarum</i>	Least tern	NL	T	Coastal areas throughout Florida, including beaches, lagoons, bays, and estuaries.	No	No	No	No
<b>Mammals</b>								
<i>Podomys floridanus</i>	Florida mouse	NL	SSC	Sand pine scrub, pine flatwoods, sand hill communities, longleaf-xeric oak.	Yes	Yes	No	No
<i>Sciurus niger shermani</i>	Sherman's fox squirrel	NL	SSC	Mature, fire-maintained longleaf pine-turkey oak habitats, pine flatwoods.	Yes	Yes	No	No
<i>Trichechus manatus</i>	West Indian manatee	E	FE	Coastal waters, bays, rivers, and (occasionally) lakes.	Yes	No	Yes	No

**Notes:**

FH = Fort Hamer Road Alternative      RR = Rye Road Alternative

E = endangered, F = Federally, T = threatened, SSC = species of special concern, T (S/A) = threatened due to similarity in appearance, NL = not listed

<sup>1</sup> As reported by the FNAI "FNAI Tracking List, Manatee County" <http://www.fnai.org>. FNAI, 2012b.

<sup>2</sup> As listed by the FWS in 50 CFR 17 (<http://www.fws.gov/endangered/>), updated March 2013.

<sup>3</sup> Plant species listed by the FDACS pursuant to Chapter 5B-40, F.A.C., updated 2007. Animal species listed by the FWC pursuant to Rules 68A-27.003 through 68A-27.005, F.A.C. (<http://myfwc.com/wildlifehabitats/imperiled/>), updated January 2013.

<sup>4</sup> Documented presence in the study area based on reported occurrences by FNAI (FNAI, 2012a) or visually observed during field reviews.

<sup>5</sup> The American Alligator is federally-listed as threatened due to its similarity of appearance to the American crocodile, which occurs in the southern tip of Florida. The final rule (52 FR 21059) for the American alligator designation removes federal agency responsibilities for the alligator under Section 7 of the Endangered Species Act.

<sup>6</sup> The bald eagle is neither state- nor federally-listed; however, this species is federally-protected by the *Bald and Golden Eagle Protection Act* and the *Migratory Bird Treaty Act* (MBTA). The bald eagle is also managed in Florida by the FWC's bald eagle rule (68A-16.002, F.A.C.). One nest is documented, but it is just outside of the Fort Hamer Alternative Study Area.

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Fort Hamer Alternative: Suitable habitat for this species is available in the Fort Hamer Alternative along the tidal estuarine marshes adjacent to the Manatee River. According to FNAI, the golden leather fern has been documented in Manatee County, but not within 1 mile of this alternative. No golden leather ferns were identified during the field reviews.

Rye Road Alternative: Suitable habitat for this species does not exist within this alternative. According to FNAI, this species has not been documented within 1 mile of the Rye Road Alternative.

### **Many-Flowered Grass-Pink**

The many-flowered grass-pink (*Calopogon multiflorus*) is state-listed as endangered by the FDACS and is a member of the orchid (*Pteridaceae*) family. This species occurs in old fields, pine savanna, and scrub oak communities and typically flowers in summer through fall.

Fort Hamer Alternative: Suitable habitat for this species is available in the Fort Hamer Alternative within the fallow crop fields north of the Manatee River. According to FNAI, the many-flowered grass-pink has been documented within Manatee County, but not within 1 mile of the alternative. No many-flowered grass-pinks were observed during the field reviews.

Rye Road Alternative: Suitable habitat for this species does not exist within this alternative. According to FNAI, this species has not been documented within 1 mile of the Rye Road Alternative.

### **Florida Goldenaster**

The Florida goldenaster (*Chrysopsis floridana*) is federally- and state-listed as endangered by both the FDACS and FWS. It grows in open, sunny areas of sand pine-evergreen oak scrub on excessively-drained white sand.

Fort Hamer Alternative: Suitable habitat for this species does not exist within this alternative. According to FNAI, this species has not been documented within 1 mile of the Fort Hamer Alternative.

Rye Road Alternative: Approximately 15 acres of scrub habitat occurs within the Rye Road Alternative study area approximately 0.25 mile north of the Rye Road bridge. The FNAI does not report any documented occurrences of this species within 1 mile of the Rye Road Alternative.

### **Sanibel Lovegrass**

Sanibel lovegrass (*Eragrostis pectinata* var. *tracyi*) is state-listed as endangered by the FDACS. This species is a member of the grass (*Poaceae*) family and occurs on drier, compact soils of disturbed beach dunes, maritime hammocks, coastal strands, coastal grasslands, roadsides, railroad embankments, gardens, and cultivated fields.

Fort Hamer Alternative: Suitable habitat for this species is available in the Fort Hamer Alternative along the roadsides and within the fallow crop fields north of the Manatee River. According to FNAI, Sanibel lovegrass has been documented within Manatee County, but not within 1 mile of this alternative. No sanibel lovegrass was observed during the field reviews.

Rye Road Alternative: Suitable habitat for this species is available within the pastures and roadsides. Based on review of FNAI data, Sanibel lovegrass has not been documented within 1 mile of this alternative and none were observed during the field reviews.

### **Tampa Vervain**

The Tampa vervain (*Glandularia tampensis*) is state-listed as endangered by the FDACS. This species is a member of the verbena (*Verbenaceae*) family and occurs in sandy coastal hammocks and dunes, clearings, well-drained live oak-slash or longleaf pine-saw palmetto flats, and disturbed areas.

Fort Hamer Alternative: Suitable habitat for this species is available in this study area within the fallow crops fields and live oak hammock north of the Manatee River. According to FNAI, Tampa vervain has been documented within Manatee County, but not within 1 mile of the alternative. No Tampa vervain was observed during the field reviews.

Rye Road Alternative: Suitable habitat for this species is available in the Rye Road Alternative within the live oak hammocks and pine flatwoods. According to FNAI, Tampa vervain has not been documented within 1 mile of this alternative and none were observed during the field reviews.

### **Wild Cotton**

Wild cotton (*Gossypium hirsutum*) is state-listed as endangered by the FDACS. This species is a member of the mallow (*Malvaceae*) family and occurs on disturbed sites such as roadsides, railroad embankments, gardens, and cultivated fields with direct exposure to sunlight.

Fort Hamer Alternative: Suitable habitat for this species is available in the Fort Hamer Alternative along the roadsides and within the fallow crops fields north of the Manatee River. According to FNAI, wild cotton has been documented within Manatee County, but not within 1 mile of this alternative. No wild cotton was observed during the field reviews.

Rye Road Alternative: Suitable habitat for this species is available in the Rye Road Alternative within the improved and unimproved pastures. According to FNAI, no wild cotton has been documented within 1 mile of this alternative and no wild cotton was observed during the field reviews.

### **Florida Spiny-Pod**

The Florida spiny-pod (*Matelea floridana*), also known as Florida milkvine, is state-listed as endangered by the FDACS. The Florida spiny-pod is a vine in the milkweed (*Asclepiadaceae*) family that occurs in a variety of wooded habitats from fairly moist woods, such as those in lime

sink areas, to dry, open oak-hickory or oak-hickory-pine upland forests. The most vigorous flowering populations occur where there has been a recent, canopy-opening disturbance. This species may not flower at all in areas where the understory and overstory are continuous, but will flower after fire.

Fort Hamer Alternative: Potentially suitable habitat for this species is available in the Fort Hamer Alternative within the forested uplands north and south of the Manatee River; however, this habitat is not desirable because of fire suppression and dense canopies. FNAI indicates the Florida spiny-pod has been documented in Manatee County, but not within 1 mile of this alternative. This species was not observed during the field reviews.

Rye Road Alternative: Potentially suitable habitat for this species is available in the upland forested areas within the alternative; however, this habitat is not desirable because of fire suppression and dense canopies. According to FNAI, the Florida spiny-pod has not been documented within 1 mile of the Rye Road Alternative and this species was not observed during the field reviews.

### **Giant Orchid**

The giant orchid (*Pteroglossaspis ecristata*) is state-listed as threatened by the FDACS. This species is a member of the orchid (*Orchidaceae*) family and occurs in sandy pinelands and herbaceous fields.

Fort Hamer Alternative: Suitable habitat for this species is available in the Fort Hamer Alternative within the fallow crop fields north of the Manatee River. According to FNAI, the giant orchid has been documented within Manatee County, but not within 1 mile of this alternative. This species was not observed during the field reviews.

Rye Road Alternative: Suitable habitat for this species is available in the Rye Road Alternative within the pastures and cropland. According to FNAI, the giant orchid has not been documented within 1 mile of this alternative and none were observed during the field reviews.

### **Large-Plumed Beaksedge**

The large-plumed beaksedge (*Rhynchospora megaplumosa*) is state-listed as endangered by the FDACS. This species is a member of the sedge (*Cyperaceae*) family and occurs in sands and sandy peats of pine flatwoods scrub and flatwoods-sand-scrub transition.

Fort Hamer Alternative: Suitable habitat for this species does not exist within this alternative. According to FNAI, this species has not been documented within 1 mile of the Rye Road Alternative.

Rye Road Alternative: Suitable habitat for this species is available in the Rye Road Alternative within the pine flatwoods and longleaf-xeric oak habitats. According to FNAI, the large-plumed beaksedge has not been documented within 1 mile of this alternative and none were observed during the field reviews.



## **4.2 FISH**

### **Mangrove Rivulus**

The mangrove rivulus (*Rivulus marmoratus*) is state-listed as a species of special concern by the FWC. This species occurs primarily in coastal brackish and saltwater areas with low oxygen content and hard-bottom areas with silt cover. They are usually collected from mangrove or high salt marsh habitats.

Fort Hamer Alternative: Potentially suitable habitat for this species does exist within the saltmarsh and mangrove habitats within this alternative. The mangrove rivulus has been documented in Manatee County, but not within 1 mile of the Fort Hamer Alternative. No mangrove rivulus were observed during field reviews.

Rye Road Alternative: Suitable habitat for this species does not exist within the Rye Road Alternative and none have been documented within 1 mile of the alternative.

## **4.3 REPTILES AND AMPHIBIANS**

### **American Alligator**

The alligator is federally-listed as “threatened due to similarity of appearance.” Alligators are common in coastal Florida, and in many parts of their range the alligator is not actually endangered or threatened. Similarity of appearance to a listed species is a regulatory designation used to facilitate the enforcement of the Endangered Species Act. It is used when a species is so similar to a listed species that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species. The American alligator has this designation due to its similarity of appearance to the endangered American crocodile (*Crocodylus acutus*) and other rare crocodilians. The final rule (52 FR 21059) for the American alligator designation removes federal agency responsibilities for the alligator under Section 7 of the Endangered Species Act.

### **Eastern Indigo Snake**

The eastern indigo snake (*Drymarchon corais couperi*) is listed as threatened by the FWS. The indigo snake is found in a variety of habitats including mesic flatwoods, swamps, wet prairies, xeric pinelands, and scrub areas. Standard protection measures for the eastern indigo snake is provided in Appendix E.

Fort Hamer Alternative: Suitable habitat is available for this species within the wetland and upland habitats throughout this alternative. Based on review of FNAI data, the eastern indigo snake has been documented within Manatee County, but not within 1 mile of the Fort Hamer Alternative. No eastern indigo snakes were observed during the field reviews.

Rye Road Alternative: Suitable habitat is available for this species within the agricultural areas, upland forests, wetland forests, and shrub and brushland. Based on review of FNAI data, the

eastern indigo snake has not been documented within 1 mile of the Rye Road Alternative and no eastern indigo snakes were observed during the field reviews.

### **Gopher Tortoise and Commensal Species**

The gopher tortoise (*Gopherus polyphemus*) is state-listed as threatened by the FWC. The gopher tortoise requires well-drained, loose sandy soils for burrowing, and low-growing herbs and grasses for food. These conditions can be found in a number of habitats including dry prairies, pine flatwoods, and disturbed or maintained sites. Gopher tortoise burrows may also harbor the Florida mouse (*Peromyscus floridanus*), pine snake (*Pituophis melanoleucus mugilis*), and gopher frog (*Rana capito*), which are listed as species of special concern by the FWC.

Fort Hamer Alternative: During the field reviews, gopher tortoise burrows were observed in fallow cropland north of the Manatee River adjacent to the Fort Hamer Alternative. The Florida mouse, pine snake, and gopher frog have not been documented within 1 mile of this alternative and were not observed during field reviews.

Rye Road Alternative: During the field reviews, no gopher tortoise burrows were observed within the Rye Road Alternative. However, suitable foraging and burrow habitat is available within the improved and unimproved pastures and in xeric habitats immediately adjacent to the alternative. The Florida mouse, pine snake, and gopher frog have not been documented within 1 mile of this alternative and were not observed during the field reviews.

## **4.4 BIRDS**

### **Florida Scrub Jay**

The Florida scrub jay (*Aphelocoma coerulescens*) is federally-listed as threatened by the FWS. This species occupies oak-dominated scrub habitat that are maintained with periodic burns. Both build alternatives are located within the designated FWS consultation area for the Florida scrub jay.

Fort Hamer Alternative: Small pockets of shrub and brushland occur within the Fort Hamer Alternative study area; however, it is not fire-maintained and does not offer suitable habitat for the Florida scrub jay. No Florida scrub jays are documented within the Fort Hamer Alternative study area.

Rye Road Alternative: Approximately 15 acres of potentially suitable scrub jay habitat occurs within the Rye Road Alternative study area approximately 0.25 mile north of the Rye Road Bridge. The FNAI does not report the presence of any scrub jays within the Rye Road Alternative Study Area. However, Florida scrub jays are reported to occur within the Rye Preserve located just east of the Rye Road Bridge (Manatee County Natural Resources Department, 2013).

## **Wading Birds**

Several wading birds including the limpkin (*Aramus guarauna*), little blue heron (*Egretta caerulea*), reddish egret (*Egretta rufescens*), snowy egret (*Egretta thula*), tricolored heron (*Egretta tricolor*), white ibis (*Eudocimus albus*), and roseate spoonbill (*Platalea ajaja*) are state-listed as species of special concern by the FWC. While each species is distinct, wading birds are discussed collectively since they occupy similar habitats and have similar feeding patterns. These wading birds nest and forage among both freshwater and saltwater habitats, such as freshwater marshes, coastal beaches, mangrove swamps, cypress swamps, hardwood swamps, wet prairies, bay swamps, rivers, creeks, and ponds.

**Fort Hamer Alternative:** Suitable habitat for each of these wading bird species exists in the marshes, swamps, and ponds within the Fort Hamer Alternative and each are common to eastern Manatee County. A little blue heron and white ibis were observed within the Fort Hamer Alternative during the April 2010 field reviews. Snowy egret, little blue heron, tricolored heron, and white ibis were also observed within the Fort Hamer Alternative Study Area during the March 2011 field reviews.

**Rye Road Alternative:** Suitable habitat for each of these wading bird species (except the roseate spoonbill) exists within the forested swamps within the Rye Road Alternative. During the March 2011 field reviews, a little blue heron and white ibis were observed within the Rye Road Alternative Study Area.

## **Florida Burrowing Owl**

The Florida burrowing owl (*Athene cunicularia floridana*) is state-listed as a species of special concern by the FWC. This species inhabits open native prairies and areas that offer an expanse of short, herbaceous groundcover such as pastures and open fields.

**Fort Hamer Alternative:** The fallow crop lands north of the Manatee River within the Fort Hamer Alternative offer marginally suitable nesting and foraging habitat for this species, although the height of the herbaceous vegetation precludes this species from most of these former crop lands. According to information received from FNAI, the Florida burrowing owl has not been documented within 1 mile of this alternative, and no individuals were observed during the field reviews.

**Rye Road Alternative:** Suitable nesting and foraging habitat for this species is available within the improved and unimproved pastures within and adjacent to this alternative. Based on review of FNAI data, there are no documented occurrences of the Florida burrowing owl within one mile of this alternative, and no individuals were observed during the field reviews.

## **Crested Caracara**

The crested caracara (*Caracara cheriway*) is listed as threatened by the FWS. This species typically inhabits open grassland habitats and improved pastures with cabbage palms. Nesting generally occurs within cabbage palms.

Fort Hamer Alternative: Although this alternative is not located within the FWS consultation area for the crested caracara, suitable foraging and marginal nesting habitat for this species exists within this alternative. Based on review of FNAI data, there are no documented occurrences of the crested caracara within 1 mile of this alternative.

Rye Road Alternative: Suitable foraging and nesting habitat exists for this species within the improved pastures in and adjacent to the Rye Road Alternative. The FWS Consultation Area for the crested caracara covers the majority of Manatee County, including this alternative. Based on review of FNAI data, this species has not been documented within 1 mile of this alternative and no individuals or nests were observed during the field reviews.

### **Southeastern American Kestrel**

The southeastern American kestrel (*Falco sparverius paulus*) is state-listed as threatened by FWC and is the smaller of two subspecies that occur in Florida. It occurs in Florida year-round, whereas the northern subspecies occurs in Florida as a winter migrant. The southeastern American kestrel uses open habitats for foraging and nests in tree cavities. Preferred habitats include pine scrub, dry prairies, mixed pine, hardwood forests, and pine flatwoods.

Fort Hamer Alternative: Suitable habitat for this subspecies occurs throughout the upland and non-marsh wetland habitats throughout the Fort Hamer Alternative. Based on review of FNAI data, there are no documented occurrences of this species within 1 mile of this alternative and none were observed during the field reviews.

Rye Road Alternative: Suitable habitat for this subspecies occurs within the upland shrub and brushland and upland forests within this alternative. Based on review of FNAI data, there are no documented occurrences of this species within 1 mile of the Rye Road Alternative and no individuals were observed during the field reviews.

### **Florida Sandhill Crane**

The Florida sandhill crane (*Grus canadensis pratensis*) is state-listed as threatened by the FWC. This subspecies is a year-round Florida resident, whereas the northern subspecies occurs in Florida as a winter migrant. The Florida sandhill crane is associated with shallow freshwater areas, pasture, and open woods habitats. Habitats such as wet and dry prairies, marshes, and marshy lake margins provide optimum nesting and foraging habitat for the Florida sandhill crane. Upland grassy areas such as fields, maintained right-of-ways (ROW), lawns, golf courses, and similar habitats also provide foraging habitat for sandhill cranes.

Fort Hamer Alternative: This subspecies does have the potential to occur within the fields and marsh edges within the Fort Hamer Alternative Study Area. Based on review of FNAI data, there are no documented occurrences of this subspecies within 1 mile of this alternative. However, during the March 2011 field reviews, sandhill cranes were observed foraging within the study area. Due to the time of year which this observation was made, it is likely that these were the Florida subspecies.

Rye Road Alternative: Suitable habitat for sandhill cranes is available within this alternative and in the improved pasture and golf courses immediately adjacent to the alternative. Based on review of FNAI data, there are no documented occurrences of this subspecies within 1 mile of this study area. However, sandhill cranes were observed foraging within the alternative during the March 2011 field reviews; it is likely that these were the Florida subspecies.

### **Wood Stork**

The wood stork (*Mycteria americana*) is listed as endangered by the FWS. The wood stork uses both freshwater and saltwater habitats, such as freshwater and saltwater marshes, tidal flats, wet prairies, cypress swamps, and agricultural environments. The FWS has defined the core foraging area (CFA) in Manatee County for the wood stork as a 15-mile radius from breeding colonies.

A review of FNAI and FWS information indicates that both the Fort Hamer Alternative and the Rye Road Alternative fall within the CFA of two breeding colonies (see **Figure 5**). One rookery is located approximately 5 miles west of the Fort Hamer Alternative and the other rookery is located approximately 9 miles north of the alternatives. No wood storks were observed during the field reviews; however, wood storks could be expected to forage within the marshes and other wetlands located within both the Fort Hamer Alternative and the Rye Road Alternative study areas.

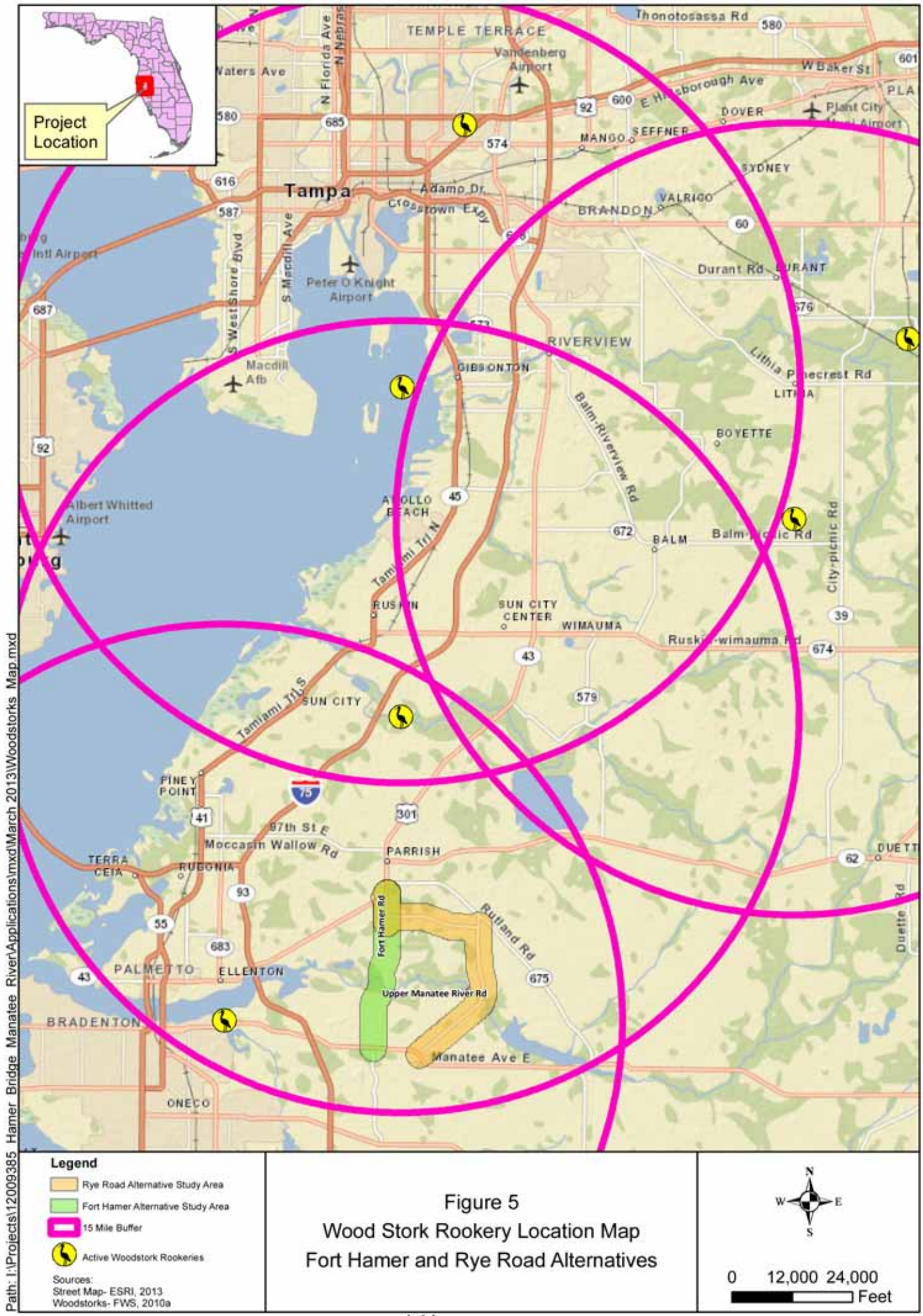
### **Brown Pelican**

The brown pelican (*Pelecanus occidentalis*) is state-listed as a species of special concern by FWC. This species' habitat is mainly coastal, feeding in shallow estuarine waters and (less often) far offshore.

Fort Hamer Alternative: The open water portion of the Manatee River offers suitable foraging habitat for this species. However, brown pelicans were observed flying over the Fort Hamer Alternative Study Area during the April 2010 field reviews. There are no documented brown pelican nesting areas within 1 mile of this alternative.

Rye Road Alternative: Suitable foraging and nesting habitat for this species does not occur within the Rye Road Alternative. Based on review of FNAI data, there are no documented brown pelican nesting areas within 1 mile of this alternative and no brown pelicans were observed during the field reviews.





## 4.5 MAMMALS

### **Florida Mouse**

See description under Gopher Tortoise and Commensal Species above.

### **Sherman's Fox Squirrel**

Sherman's fox squirrel (*Sciurus niger shermanii*) is state-listed as a species of special concern by FWC. This species prefers mature, fire maintained longleaf pine, turkey oak habitats, and flatwoods.

**Fort Hamer Alternative:** Although none of these habitats are located within the Fort Hamer Alternative, oak scrub habitat and pine-oak forests are located adjacent to the alternative in the study area. According to information received from FNAI, Sherman's fox squirrel has not been documented within 1 mile of this alternative, and no individuals were observed during the field reviews.

**Rye Road Alternative:** Suitable habitat for this species is available within the Rye Road Alternative within the upland forested areas. Based on review of FNAI data, no individuals are documented within 1 mile of the alternative and none were observed during the field reviews.

### **West Indian Manatee**

The West Indian manatee is listed as endangered by the FWS. The West Indian manatee is an herbivorous marine mammal typically found in freshwater rivers, estuaries, and coastal waters of the Gulf of Mexico and the Atlantic Ocean. The range of this species is generally limited to the tropics and sub-tropics due to an extremely low metabolic rate and lack of a thick layer of insulating body fat.

**Fort Hamer Alternative:** According to information provided by FNAI, FWS, and FWC, manatees are known to occur within the Manatee River, including that portion of the river within the Fort Hamer Alternative. The Manatee River downstream of the Lake Manatee dam is designated by the FWS as critical habitat for the West Indian manatee (Federal Register, 1976).

In September 2010, manatee birthing and calving information was requested from the FWC. Specifically, information was requested regarding the section of the Manatee River in the vicinity of the two build alternatives being used as a nursery for birthing or raising calves. FWC responded by providing links to the aerial survey data collected by FWC from 1985 to 2008 and a link to manatee mortality data collected by the Florida Fish and Wildlife Research Institute (FWRI). All correspondence with FWC regarding the West Indian manatee is included in Appendix A.

The data provided by FWC (FWC, 2011) and FWRI indicates that manatee calf observations and manatee mortalities have been documented in the vicinity of the Fort Hamer Alternative. However, the data does not indicate that this portion of the river has greater manatee mortality or

is used by manatees as a calving/nursery area at higher rates than other portions of the Manatee River.

Rye Road Alternative: The Manatee River downstream of the Lake Manatee dam, including that portion of the river within the Rye Road Alternative, is designated by the FWS as critical habitat for the West Indian manatee. However, the portion of the river located within the Rye Road Alternative does not provide suitable habitat for the West Indian manatee due to the shallow water and narrow width. No manatees were observed in the Rye Road Alternative during the field reviews.

## **4.6 OTHER SPECIES**

### **Florida Grasshopper Sparrow**

The Florida grasshopper sparrow (*Ammodramus savannarum floridana*) is federally-listed as endangered. Although it has never been documented in Manatee County (and consequently does not appear in Table 3), the FWS consultation area for the Florida grasshopper sparrow extends into eastern Manatee County. Habitat for the Florida grasshopper sparrow is limited to frequently burned, dry riparian prairie in south central Florida.

Fort Hamer Alternative: The Fort Hamer Alternative Study Area is outside of the FWS consultation area for the Florida grasshopper sparrow. Suitable habitat for this specie does not exist within the study area for this alternative and none were observed during field reviews.

Rye Road Alternative: The Rye Road Alternative Study Area occurs within the western edge of the FWS consultation area for the Florida grasshopper sparrow. Suitable habitat for this species does not exist within the study area for this alternative and none were observed during field reviews.

### **Bald Eagle**

Although the bald eagle (*Haliaeetus leucocephalus*) is no longer state- or federally-listed, it is still federally-protected by the *Bald and Golden Eagle Protection Act* in accordance with 16 United States Code (U.S.C.) 668 and the *Migratory Bird Treaty Act* (MBTA). It is also state-protected by Chapter 68A-16.002, F.A.C., and the FWC *Bald Eagle Management Plan* (FWC, 2008). Pursuant to FWC bald eagle guidelines, any disturbance within 660 feet of a bald eagle nest requires coordination and potential permitting with the FWC. The bald eagle typically uses riparian habitat associated with coastal areas, lake shorelines, and river banks. The nests are generally located near bodies of water that provide a dependable food source.

Fort Hamer Alternative: According to the FWC's online bald eagle nest locator (FWC, 2011) (reviewed March 28, 2013), one bald eagle nest is documented within the Waterlefe subdivision 0.52 mile west of the Fort Hamer Alternative (Nest ID: MN013) (see **Figure 6**). This nest was last surveyed and reported active in 2010. No bald eagles or nests were observed within this study area during the field reviews.



Rye Road Alternative: According to the FWC's online bald eagle nest locator, no bald eagle nest is documented in the Rye Road Alternative Study Area and no individuals were observed within the alternative during the field reviews.

### **Migratory Bird Species**

Most bird species (including both listed and non-listed species) that currently exist or have the potential to exist within the study are for either build alternative are afforded protection under the MBTA. Generally, the MBTA prevents the unauthorized killing or disturbance of birds protected by the MBTA.

### **Eastern Diamondback Rattlesnake**

On May 9, 2012, the FWS announced a 90-day finding on a petition to list the eastern diamondback rattlesnake (*Crotalus adamanteus*) as threatened and designate critical habitat for the species under the ESA, opening a 60-day comment period. The 60-day period expired on July 9, 2012; however, the FWS will continue to accept comments and information. FWS will undertake a more comprehensive review of the snake's status throughout the species' range to determine whether listing is warranted under the ESA.


The FWS is asking for information from state and federal natural resource agencies and all interested parties regarding the eastern diamondback rattlesnake and its habitat. Based on the status review, the FWS will make one of three possible determinations:

- Listing is not warranted, in which case no further action will be taken.
- Listing as threatened or endangered is warranted. In this case, the FWS will publish a proposal to list, solicit independent scientific peer review of the proposal, seek input from the public, and consider the input before a final decision about listing the species is made. In general, there is a 1-year period between the time a species is proposed for listing and the final decision.
- Listing is warranted but precluded by other, higher priority activities. This means the species is added to the federal list of candidate species, and the proposal to list is deferred while the FWS works on listing proposals for other species that are at greater risk. A warranted but precluded finding requires subsequent annual reviews of the finding until such time as either a listing proposal is published or a not warranted finding is made based on new information.

Suitable habitat for the eastern diamondback rattlesnake occurs throughout the undeveloped portions of both the Fort Hamer Alternative and Rye Road Alternative study areas. None were observed during the field reviews; however, their presence in either alternative would not be unexpected.



**Legend**

-  Construction Limits
-  Bald Eagle Nest

Sources:  
Aerial- FDOT, 2011  
Bald Eagle- FWC, 2011

Figure 6  
Eagle Nest near  
Fort Hamer Alternative  
Construction Limits



0 500 1,000  
Feet

## ***Section 5.0***

# ***LISTED SPECIES IMPACTS***

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This section describes potential impacts to federally- and state-listed species that would occur as a result of the construction and operation of each of the two build alternatives.

## **5.1 PLANTS**

Although federally- and state-listed plant species have been documented within Manatee County, none have been documented within 1 mile of the Fort Hamer or Rye Road Alternatives and none were observed during field reviews. Based on this information, it has been determined that both the Fort Hamer and Rye Road Alternatives will have no effect on any federally- or state-listed plant species.

## **5.2 FISH**

### **Mangrove Rivulus**

#### *State Species of Special Concern*

While suitable habitat exists for the mangrove rivulus within the Fort Hamer Alternative, none were observed during the April 2010 field reviews and none have been documented within 1 mile of the alternative. Total impacts (shading, fill, and secondary) to mangrove habitat will be 0.20 acre. The conceptual wetlands mitigation for the project will result in the creation of 0.20 acres of mangrove habitat. (See the Wetlands Evaluation Report in Appendix D of the DEIS for a description of the proposed conceptual mitigation.) Therefore, it has been determined that the Fort Hamer Alternative will have no effect on the mangrove rivulus.

Suitable habitat for the mangrove rivulus does not exist within the Rye Road Alternative and none have been documented within 1 mile of this alternative. Therefore, it has been determined that the Rye Road Alternative will have no effect on the mangrove rivulus.

## **5.3 REPTILES AND AMPHIBIANS**

### **Eastern Indigo Snake**

#### *Federally Threatened*

While no eastern indigo snakes were observed during field reviews, suitable habitat for this species does exist within both build alternatives. The FWS and FWC approved standard protection measures for the eastern indigo snake (Appendix E) will be implemented during the clearing and construction phases for the selected alternative. As a result of this commitment, it



has been determined that both the Fort Hamer Alternative and the Rye Road Alternative “may affect, but is not likely to adversely affect” the eastern indigo snake.

### **Gopher Tortoise and Commensal Species**

#### *State Threatened/Species of Special Concern*

Suitable habitat is available within both build alternatives for the gopher tortoise (state-listed as threatened), Florida mouse (SSC), gopher frog (SSC), and pine snake (SSC). Gopher tortoise burrows were observed north of the Manatee River adjacent to the Fort Hamer Alternative. The Florida mouse, gopher frog, and pine snake have not been documented within 1 mile of the Fort Hamer Alternative or the Rye Road Alternative and none were observed during field reviews. Approximately 17 acres of suitable habitat (uplands) within the Fort Hamer Alternative construction limits and approximately 38 acres of suitable habitat (uplands) within the Rye Road Alternative construction limits will need to be surveyed for the presence of gopher tortoise burrows prior to construction. If gopher tortoises or their burrows are found in or within 25 feet of the construction limits of the selected alternative, Manatee County will coordinate with the FWC to secure permits needed to relocate the gopher tortoises and associated commensal species prior to construction. With this commitment, a determination was made that both the Fort Hamer Alternative and the Rye Road Alternative “may affect, but is not likely to adversely affect” the gopher tortoise, Florida mouse, gopher frog, or pine snake.

## **5.4 BIRDS**

### **Florida Scrub Jay**

#### *Federally Threatened*

Suitable habitat for the Florida scrub jay does not exist within the Fort Hamer Alternative Study Area and no scrub jays are reported within the study area. For these reasons, implementation of the Fort Hamer Alternative will have no effect on the Florida scrub jay.

Approximately 15 acres of suitable habitat for the Florida scrub jay exists within the Rye Road Alternative 0.25-mile north of the Rye Road Bridge. Additionally, scrub jays reportedly occur within the Rye Preserve east of the Rye Road Bridge. The Rye Road Alternative would entail construction within the existing ROW, thereby lessening adverse effects to the Rye Preserve scrub jay population. Based on this assessment, it was determined that implementation of the Rye Road Alternative “may affect, but is not likely to adversely affect” the Florida scrub jay. Should the Rye Road Alternative be advanced for permitting, design, and construction; additional field surveys and coordination with the FWS will be required for this species.

### **Other Wading Birds**

#### *State Species of Special Concern*

No wading bird rookeries are located within the Fort Hamer Alternative or the Rye Road Alternative; however, the little blue heron, reddish egret, snowy egret, limpkin, tricolored heron,

white ibis, and roseate spoonbill have the potential to forage in the drainage ditches and wetlands within both of the alternatives. A little blue heron, white ibis, snowy egret, and tricolored heron were observed in the Fort Hamer Alternative. A little blue heron and white ibis were observed within the limits of the Rye Road Alternative during the field reviews. The primary concern for impacts to these wading birds is the loss of habitat (wetlands) for foraging. All wetland impacts will be mitigated to prevent a net loss of wetland functions and values. Because lost foraging habitat would be replaced through wetland mitigation, it was determined that both the Fort Hamer Alternative and the Rye Road Alternative will have no effect on populations of these species.

### **Florida Burrowing Owl**

#### *State Species of Special Concern*

Potentially suitable nesting and foraging habitat for the Florida burrowing owl exists within the limits of both build alternatives. However, no burrowing owls or their burrows were observed during field reviews and none have been documented within 1 mile of the two build alternatives. To avoid potential impacts to this species, Manatee County will resurvey appropriate upland habitats within the study area of the selected alternative for burrowing owls or their burrows prior to construction. If any burrows are located in the study area, Manatee County will coordinate with FWC to develop and implement the appropriate protection criteria prior to construction. With this commitment, a determination has been made that both the Fort Hamer Alternative and the Rye Road Alternative will have no effect on the Florida burrowing owl.

### **Crested Caracara**

#### *Federally Threatened*

The Fort Hamer Alternative is not located within the FWS consultation area for the crested caracara; however, suitable foraging and marginal nesting habitat exist. No crested caracara were observed during field reviews and none have been documented within 1 mile of this alternative. A determination has been made that the Fort Hamer Alternative will have no effect on the crested caracara.

Suitable foraging and nesting habitat for the crested caracara exists within the limits of the Rye Road Alternative. The FWS Consultation Area for the crested caracara covers the Rye Road Alternative. No caracaras or nests were observed during field reviews and none have been documented within 1 mile of the Rye Road Alternative. To avoid any potential impacts to this species, Manatee County will resurvey appropriate upland habitats within the study area for caracara nests prior to construction if the Rye Road Alternative is selected for construction. If any nests are located in the study area, Manatee County will coordinate with FWS to develop and implement the appropriate protection criteria prior to construction. With this commitment, a determination has been made that the Rye Road Alternative “may affect, but is not likely to adversely affect” the crested caracara.

## **Southeastern American Kestrel**

### *State Threatened*

While suitable nesting and foraging habitat exists for the southeastern American kestrel within the limits of both the Fort Hamer Alternative and the Rye Road Alternative, no kestrels were observed during the field reviews. Due to its mobility and ability to use adjacent areas for nesting and foraging, it has been determined that both the Fort Hamer Alternative and the Rye Road Alternative will have no effect the southeastern American kestrel.

## **Florida Sandhill Crane**

### *State Threatened*

Suitable nesting and foraging habitat is available within both build alternatives for the Florida sandhill crane. Sandhill cranes were observed within both build alternatives during field reviews. For both of the alternatives, wetland impacts would be mitigated to prevent a net loss of wetland functions and values. In addition, Manatee County will resurvey the selected alternative's study area for Florida sandhill crane nests prior to construction. If Florida sandhill crane nests are found within the study area, Manatee County will coordinate with the FWC to ensure project construction will not adversely impact this species. With this commitment, it has been determined that both the Fort Hamer Alternative and the Rye Road Alternative will have no effect on the Florida sandhill crane.

## **Wood Stork**

### *Federally Endangered*

Suitable nesting and foraging habitat for the wood stork is available within both build alternatives. Based on FWS data (2010a), both alternatives are located within the 15-mile CFA of two wood stork rookeries (see Figure 5).

In order to make a determination of the build alternatives' potential effects on the wood stork, the construction impacts resulting from both build alternatives were assessed using the Wood Stork Effect Determination Key (FWS, 2010b). A review of FNAI and FWS information indicates that neither the Fort Hamer Alternative nor the Rye Road Alternative are located within 2,500 feet of an active wood stork colony site; however, both the Fort Hamer Alternative and the Rye Road Alternative are located within the CFA of two active wood stork nesting colonies.

Either build alternative would impact more than 0.5 acre of suitable foraging habitat (SFH) (0.5 acre is the threshold for a "not likely to adversely affect" determination). The Fort Hamer Alternative would result in fill and shading impacts to 4.68 acres of SFH. The Rye Road Alternative would result in fill and shading impacts to 2.52 acres of SFH.

The FWS believes loss of suitable wetlands within CFAs may reduce foraging opportunities for the wood stork. To minimize adverse effects to the wood stork, the FWS recommends compensation be provided for impacts to foraging habitat (FWS, 2010b). Wetlands offered as compensation should be of the same hydroperiod and located within the CFAs of the affected

wood stork colonies. To compensate for the loss of SFH, implementation of the selected alternative 1) will include creation of habitat and foraging function equal, at a minimum, to that being impacted; 2) will not be contrary to the FWS Habitat Management Guidelines for the Wood Stork in the Southeast Region (Ogden, 1990), and 3) will be in accordance with the Clean Water Act, Section 404(b)1 guidelines. Based on this assessment, it was determined that both the Fort Hamer Alternative and the Rye Road Alternative "may affect, but is not likely to adversely affect" the wood stork.

### **Brown Pelican**

#### *State Species of Special Concern*

Suitable nesting and foraging habitat exists for the brown pelican within the Fort Hamer Alternative and brown pelicans were observed flying over this alternative during the April 2010 field reviews. However, due to its mobility and ability to use adjacent surface waters and proposed mitigation sites for foraging, it has been determined that the Fort Hamer Alternative will have no effect on the brown pelican.

Suitable nesting and foraging habitat does not exist for the brown pelican within the Rye Road Alternative. Therefore, it has been determined that the Rye Road Alternative will have no effect on the brown pelican.

## **5.5 MAMMALS**

### **Florida Mouse**

See description under Gopher Tortoise and Commensal Species above.

### **Sherman's Fox Squirrel**

#### *State Species of Special Concern*

While suitable nesting and foraging habitat exists for the Sherman's fox squirrel within both build alternatives, none were observed during the field reviews and none have been documented within 1 mile of either alternative. Due to its mobility and ability to use adjacent upland habitats for nesting and foraging, it has been determined that both the Fort Hamer Alternative and the Rye Road Alternative will have no effect on the Sherman's fox squirrel.

### **West Indian Manatee**

#### *Federally Endangered*

The Manatee River provides suitable habitat for the West Indian manatee in the Fort Hamer Alternative. Though no manatees were observed during field reviews, FNAI, FWS, and FWC have indicated that manatees are known to frequent the Manatee River and local residents have reported sightings of manatees in the vicinity of the Fort Hamer Alternative. The Manatee River within both alternatives is designated as Critical Habitat for the manatee below the Lake Manatee Dam. To minimize potential adverse impacts to the manatee as a result of construction of the



Fort Hamer Alternative, Manatee County will utilize the FWS and FWC approved *Standard Manatee Conditions for In-Water Work* (Appendix F) for all construction activities within the Manatee River. Manatee County will also coordinate with the FWS and the FWC to determine the appropriate, site-specific manatee protection measures to be implemented during construction. With these commitments, it has been determined that both the Fort Hamer Alternative and Rye Road Alternative “may affect, but is not likely to adversely affect” the West Indian manatee.

## **5.6 OTHER SPECIES**

### **Florida Grasshopper Sparrow**

#### *Federally Endangered*

The Florida grasshopper sparrow has not been documented in Manatee County, suitable habitat for this species does not occur within the study area of either build alternative, and no individuals of this species was observed during field reviews. For these reasons, it has been determined that both the Fort Hamer Alternative and Rye Road Alternative will have “no effect” on the Florida grasshopper sparrow.

### **Bald Eagle**

Based on available information and field reviews, a bald eagle nest is located 0.52 mile west of the Fort Hamer Alternative near the Waterlefe subdivision. This nest was last surveyed and documented by FWC as active in 2010. No bald eagle nests were observed within 660 feet of either alternative during the field reviews. Manatee County will resurvey appropriate habitats within the study area of the selected alternative and review the most current FWC database for documented bald eagle nests prior to construction. If a nest is observed or documented within 660 feet of the study area, Manatee County will coordinate with the FWS and FWC to minimize impacts to this species. For these reasons, it has been determined that both the Fort Hamer Alternative and the Rye Road Alternative will have no effect on the bald eagle.

### **MBTA Protected Species**

In compliance with the MBTA, Manatee County will not destroy any known or discovered bird nests containing eggs or flightless young during construction of the selected alternative. Should any osprey nests be located within the selected alternative, Manatee County will coordinate appropriately with FWC and FWS to obtain all needed permits.

### **Eastern Diamondback Rattlesnake**

Currently, the eastern diamondback rattlesnake is not a listed species, nor is it a proposed or candidate species for listing. If this species becomes a proposed or candidate species for listing, or is listed as threatened during the permitting process for the selected alternative, the USCG will re-initiate consultation with the FWS.

## ***Section 6.0***

### ***CRITICAL HABITAT***

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The Fort Hamer Alternative and Rye Road Alternative were evaluated for the presence of listed species' critical habitat designated by Congress in 17 CFR 35.1532. Both alternatives are located within designated critical habitat for the West Indian manatee. The Manatee River is designated as critical habitat for the West Indian manatee from the Lake Manatee Dam downstream to the Gulf of Mexico (Federal Register, 1976). No other designated critical habitat occurs within the Fort Hamer Alternative and Rye Road Alternative.

Within the Fort Hamer Alternative, sparse, narrow strips of submerged aquatic vegetation (widgeon grass) are present along the south shore of a peninsula in the Manatee River. The Manatee River and peninsula are described as River 1a in the WER included as Appendix D to the DEIS. The widgeon grass in this area occurs in patches of generally short, thin bladed stems and leaves and show signs of stress from wave energy. Construction impacts to the widgeon grass will be minimized by marking the boundaries of the seagrass bed prior to construction. No construction equipment will be allowed to moor or operate within the areas containing widgeon grass. In addition, no bridge support structures will be placed within the areas of widgeon grass to prevent direct impacts to the submerged vegetation. Once constructed, shading impacts to the submerged vegetation will be minimal due to the general north to south orientation of the bridge and the height of the bridge (32 feet) above mean high water. Based on this information, it has been determined that the Fort Hamer Alternative “may affect, but is not likely to adversely affect” designated critical habitat for the West Indian manatee. The FWS previously concurred with this determination in 2001 when the Fort Hamer Bridge project was proposed by the FHWA/FDOT (see Appendix A, FWS letter dated October 3, 2001).

Within the Rye Road Alternative, the Manatee River is relatively narrow (approximately 73 feet wide) and shallow with little to no submerged aquatic vegetation present. Although this location of the river is designated as critical habitat for the West Indian manatee, it does not provide suitable habitat for the manatee due to the lack of submerged aquatic vegetation, narrow width, and shallow water. Therefore, it has been determined that the Rye Road Alternative “may affect, but is not likely to adversely affect” designated critical habitat for the West Indian manatee.

## *Section 7.0*

# *CUMULATIVE EFFECTS*

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Section 7 of the ESA requires a cumulative effects analysis for actions that may affect listed species or critical habitat. Cumulative effects to be considered under Section 7 of the ESA include the effects of future state, tribal, local, or private actions that are reasonably certain to occur in the project area. Future federal actions that are unrelated to the Proposed Action are not considered in the cumulative effects analysis because they require separate consultation pursuant to Section 7 of the ESA (FWS and NMFS, 1998).

### *7.1 LAND USE AND GROWTH*

Manatee County, in particular the eastern half of the County where the project area is located, has changed dramatically in the past three decades. Since adoption of the Manatee County Comprehensive Plan in 1989, the development pattern and character of the region has changed from predominantly agricultural and rural to suburban and commercial. Suburban-style development in the form of gated communities and other single-family developments, expanded transportation networks, retail opportunities, and community services have been planned for and constructed.

The Manatee County 2030 Approved Future Land Use Zoning (MBCC, 2012) shows the majority of both the Fort Hamer Alternative and Rye Road Alternative study areas will be available for residential and mixed-use development within the next 15 years. **Table 4** summarizes the future land use zoning in both study areas.

During the period 2000-2004 residential home construction in Manatee County averaged 4,000 new dwelling units per year. A surge in growth occurred from 2004 to 2005 when approximately 6,000 new dwelling units per year were constructed. With the collapse of the housing market in 2006, new home construction fell to approximately 1,250 units per year between 2007 and 2011. Since 2011, new home construction has once again begun to increase in eastern Manatee County.

Metropolitan Planning Organizations (MPOs) commonly use traffic analysis zones (TAZs) to assess population, housing, and commercial development trends and to identify traffic improvement needs in a given area. The Sarasota/Manatee MPO has developed a transportation model (SMC Model) that includes the TAZs that intersect the Fort Hamer Alternative and Rye Road Alternative study areas (Sarasota/Manatee MPO, 2011). A total of 19 TAZs intersect the Fort Hamer Alternative Study Area. As shown in **Table 5**, the SMC Model shows the population within these TAZs increasing from 9,162 in 2007 to 18,573 by 2035. During this same period the number of housing units are projected to increase from 4,452 to 7,889.

**TABLE 4**  
**2030 APPROVED FUTURE LAND USE WITHIN THE FORT HAMER ALTERNATIVE AND RYE ROAD**  
**ALTERNATIVE STUDY AREAS**

Land Use	Fort Hamer Alternative Study Area		Rye Road Alternative Study Area	
	Acres	Percent of Area	Acres	Percent of Area
Agriculture/Rural (AG-R)	126	2.9	9	0.1
Conservation Lands (CON)	0	0	184	2.6
Industrial-Light (IL)	73	1.7	0	0
Mixed Use (MU)	21	0.5	60	0.9
Mixed Use Community (MU-C)	34	0.8	0	0
Public/Semi-Public 1 (P/SP-1)	46	1.1	1	0.0
Residential – 6 DU/GA (RES-6)	222	5.1	222	3.2
Retail/Office/Residential (ROR)	103	2.4	0	0
Major Recreation/Open Space (R-OS)	82	1.9	49	0.7
Urban Fringe – 3 DU/GA (UF-3)	3,637	83.7	6,521	92.5
<b>Total</b>	<b>4,344</b>	<b>100</b>	<b>7,046</b>	<b>100</b>

Source: MBCC, 2012.

**TABLE 5**  
**POPULATION AND HOUSING PROJECTIONS WITHIN TAZs THAT INTERSECT THE FORT**  
**HAMER ALTERNATIVE STUDY AREA**

Year	Population	Housing Units
2007	9,162	4,452
2015	13,022	5,436
2035	18,573	7,889

Source: Sarasota/Manatee MPO, 2011.

A total of 22 TAZs intersect the Rye Road Alternative study area. **Table 6** shows that the population within these TAZs is projected to increase from 10,627 in 2007 to 18,395 by 2035. During this same period the number of housing units are projected to increase from 4,344 to 7,276.

**TABLE 6**  
**POPULATION AND HOUSING PROJECTIONS WITHIN TRAFFIC ANALYSIS ZONES THAT**  
**INTERSECT THE RYE ROAD ALTERNATIVE STUDY AREA**

Year	Population	Housing Units
2007	10,627	4,344
2015	13,392	5,182
2035	18,395	7,276

Source: Sarasota/Manatee MPO, 2011.

## 7.2 COUNTY PROJECTS

In addition to the existing and projected private development described above, Manatee County has funded for design and construction transportation improvement projects located within the Fort Hamer Alternative Study Area (**Table 7**). These projects are independent from the proposed bridge project associated with the Fort Hamer Alternative (i.e., they are being constructed even if the Fort Hamer Alternative is not implemented). Direct habitat loss from these projects is expected to be minimal. Manatee County currently has no reasonably foreseeable transportation improvement projects within the Rye Road Alternative Study Area.

**TABLE 7  
EXISTING AND PLANNED TRANSPORTATION IMPROVEMENT PROJECTS IN THE VICINITY OF  
THE FORT HAMER ALTERNATIVE**

<b>Project Name</b>	<b>Description</b>	<b>Fiscal Year Funding Design Status</b>	<b>Fiscal Year Funding Construction Status</b>
Upper Manatee River Road from SR 64 to Fort Hamer Bridge	Roadway improvements to include widening, shoulder enhancement, and sidewalk. Intersection improvements to provide right- and left-turning lane movements.	2012/2013 \$200,000 Under design	2014 \$1,575,000 Upon completion of design/permits
Fort Hamer Road from US 301 to proposed Fort Hamer Bridge	Roadway improvements to include widening, shoulder enhancement, and sidewalk. Intersection improvements to provide right- and left-turning lane movements.	2012/2013 \$125,000 Under design	2014 \$975,000 Upon completion of design/permits
U.S. 301 @ Fort Hamer Road Intersection	Intersection improvements to include realignment, signalization upgrades, and turn lanes in all directions.	2012 \$300,000 Design complete	2013/2014 \$2,200,000 Bidding/construction

Source: Manatee County Public Works Department, 2013.

Construction and operation of either the Fort Hamer Alternative or the Rye Road Alternative will result in an incremental loss of native upland habitat, agricultural lands, and other disturbed but undeveloped lands. Direct impacts to wetlands have occurred with past development and will likely continue but on a smaller scale as future developments are constructed. Both the Fort Hamer Alternative and Rye Road Alternative will result in direct impacts to wetlands. Current state and federal regulations require compensatory mitigation for unavoidable impacts to wetlands. Existing regulatory mechanisms require that the compensatory mitigation replaces, at a minimum, the lost value of ecological functions of the impacted wetlands. As a result, the net loss of wetlands resulting from future projects in the region is expected to be minimal, if at all.

Increased impervious areas associated with development and roadway projects have resulted in increased stormwater runoff to receiving streams. Prior to the implementation of stormwater treatment regulations by the state, this runoff was usually directly discharged to receiving waters resulting in lower water quality and contributing to flood events. Current regulations and permitting criteria require stormwater from all developments and transportation projects to be captured and routed through a stormwater treatment system designed to meet specific standards. Encroachment into designated flood zones is required to be off-set by a similar enlargement of the storage capacity within the same drainage basin. For the Proposed Action, the selected build alternative would be designed and constructed according to the permitting criteria for water quality and quantity, as would all future developments within and adjacent to the project area. As a result, the cumulative impact to water quality and quantity, and the listed species dependent upon these water resources within the project area, are expected to be minimal.

As discussed in the previous section, an effect determination of “may affect, not likely to adversely affect (NLAA)” has been made for the eastern indigo snake, West Indian manatee, and wood stork for both build alternatives. Additionally, the crested caracara and Florida scrub jay have a NLAA determination for the Rye Road Alternative. Of these species, the wood stork is wetland dependent, the West Indian manatee is open water dependent, the crested caracara and Florida scrub jay are upland dependent, and the eastern indigo snake can inhabit both uplands and wetlands.

Due to the existing regulatory mechanisms protecting wetlands and water quality from stormwater runoff, the cumulative effects of implementation of either build alternative and the reasonably foreseeable development and infrastructure projects discussed above are not expected to adversely affect wetland dependent listed species. Loss of upland habitat potentially available to the eastern indigo snake and the crested caracara will occur as a result of future development and transportation improvement projects along Upper Manatee River Road, Fort Hamer Road, and Rye Road; however, these losses are not likely to adversely affect the eastern indigo snake and crested caracara given the lack of documented occurrences of these species in the area.

# Section 8.0

## ***EFFECT DETERMINATION SUMMARY***

In summary, federally- and state-listed plant and animal species were identified as having the potential to occur within either build alternative. **Tables 8 and 9** provide the effect determinations for the federally- and state-listed species for the Fort Hamer Alternative and the Rye Road Alternative, respectively. Based on the findings and commitments presented in this BA, it has been determined that neither the Fort Hamer Alternative, nor the Rye Road Alternative is likely to adversely affect any federally-listed species, critical habitat, or any state-listed species.

**TABLE 8**  
**LISTED SPECIES EFFECT DETERMINATIONS FOR THE FORT HAMER ALTERNATIVE**

<b>Project Effect Determination</b>	<b>Federally-Listed Species</b>
May affect, not likely to adversely affect	Eastern indigo snake ( <i>Drymarchon corais couperi</i> ) West Indian manatee ( <i>Manatus trichechus</i> ) and critical habitat Wood stork ( <i>Mycteria americana</i> )
No effect	Florida goldenaster ( <i>Chrysopsis floridana</i> ) Florida scrub jay ( <i>Aphelocoma coerulescens</i> ) Florida grasshopper sparrow ( <i>Ammodramus savannarum floridana</i> ) Crested caracara ( <i>Caracara cheriway</i> )
<b>Project Effect Determination</b>	<b>State-Listed Species</b>
May affect, not likely to adversely affect	Gopher tortoise ( <i>Gopherus polyphemus</i> ) Pine snake ( <i>Pituophis melanoleucus mugitis</i> ) Florida mouse ( <i>Podomys floridanus</i> ) Gopher frog ( <i>Rana capito</i> )
No effect	<p><b><u>Plants</u></b>  Golden leather fern (<i>Acrostichum aureum</i>)  Many-flowered grass pink (<i>Calopogon multiflorus</i>)  Florida goldenaster (<i>Chrysopsis floridana</i>)  Sanibel lovegrass (<i>Eragrostis pectinacea</i> var. <i>tracyi</i>)  Tampa vervain (<i>Glandularia [Verbena] tampensis</i>)  Wild cotton (<i>Gossypium hirsutum</i>)  Florida spiny-pod (<i>Matalea floridana</i>)  Giant orchid (<i>Pteroglossaspis [Eulophia] ecristata</i>)  Large-plumed beaksedge (<i>Rhynchospora megalumosa</i>)</p> <p><b><u>Animals</u></b>  Limpkin (<i>Aramus guarauna</i>)  Florida burrowing owl (<i>Athene cunicularia floridana</i>)  Little blue heron (<i>Egretta caerulea</i>)  Reddish egret (<i>Egretta rufescens</i>)  Snowy egret (<i>Egretta thula</i>)  Tricolored heron (<i>Egretta tricolor</i>)  White ibis (<i>Eudicimus albus</i>)  Southeastern American kestrel (<i>Falco sparverius paulus</i>)  Florida sandhill crane (<i>Grus canadensis pratensis</i>)  Brown pelican (<i>Pelecanus occidentalis</i>)  Roseate spoonbill (<i>Platalea ajaja</i>)</p>

*Continued on next page*



**TABLE 8 (CONTINUED)**  
**LISTED SPECIES EFFECT DETERMINATIONS FOR THE FORT HAMER ALTERNATIVE**

Project Effect Determination	State Listed Species
No effect (Continued)	Mangrove rivulus ( <i>Rivulus marmoratus</i> ) Sherman's fox squirrel ( <i>Sciurus niger shermanii</i> )

**TABLE 9**  
**LISTED SPECIES EFFECT DETERMINATIONS FOR THE RYE ROAD ALTERNATIVE**

Project Effect Determination	Federally-Listed Species
May affect, not likely to adversely affect	Eastern indigo snake ( <i>Drymarchon corais couperi</i> ) Crested caracara ( <i>Caracara cheriway</i> ) West Indian manatee ( <i>Manatus trichechus</i> ) and critical habitat Florida scrub jay ( <i>Aphelocoma coerulescens</i> ) Wood stork ( <i>Mycteria americana</i> )
No effect	Florida goldenaster ( <i>Chrysopsis floridana</i> ) Florida grasshopper sparrow ( <i>Ammodramus savannarum floridana</i> )
Project Effect Determination	State-Listed Species
May affect, not likely to adversely affect	Gopher tortoise ( <i>Gopherus polyphemus</i> ) Pine snake ( <i>Pituophis melanoleucus mugitis</i> ) Florida mouse ( <i>Peromyscus floridanus</i> ) Gopher frog ( <i>Rana capito</i> )
No effect	<b><u>Plants</u></b> Golden leather fern ( <i>Acrostichum aureum</i> ) Many-flowered grass pink ( <i>Calopogon multiflorus</i> ) Florida goldenaster ( <i>Chrysopsis floridana</i> ) Sanibel lovegrass ( <i>Eragrostis pectinacea</i> var. <i>tracyi</i> ) Tampa vervain ( <i>Glandularia [Verbena] tampensis</i> ) Wild cotton ( <i>Gossypium hirsutum</i> ) Florida spiny-pod ( <i>Matalea floridana</i> ) Giant orchid ( <i>Pteroglossaspis [Eulophia] ecristata</i> ) Large-plumed beaksedge ( <i>Rhynchospora megalplumosa</i> ) <b><u>Animals</u></b> Limpkin ( <i>Aramus guarauna</i> ) Florida burrowing owl ( <i>Athene cunicularia floridana</i> ) Little blue heron ( <i>Egretta caerulea</i> ) Reddish egret ( <i>Egretta rufescens</i> ) Snowy egret ( <i>Egretta thula</i> ) Tricolored heron ( <i>Egretta tricolor</i> ) White ibis ( <i>Eudicimus albus</i> ) Southeastern American kestrel ( <i>Falco sparverius paulus</i> ) Florida sandhill crane ( <i>Grus canadensis pratensis</i> ) Brown pelican ( <i>Pelecanus occidentalis</i> ) Roseate spoonbill ( <i>Platalea ajaja</i> ) Mangrove rivulus ( <i>Rivulus marmoratus</i> ) Sherman's fox squirrel ( <i>Sciurus niger shermanii</i> )

## ***Section 9.0***

# ***COMMITMENTS***

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Based on the field and literature reviews outlined in this BA and information received from FWS, FWC, and FNAI, federally- and state-listed species have the potential to occur within both the Fort Hamer Alternative and the Rye Road Alternative. In order to avoid or minimize potential adverse impacts to these species, Manatee County will commit to the following items, depending on the alternative selected for construction:

1. Implement the FWS standard protection measures for the eastern indigo snake (Appendix E) during all construction phases of the project (both build alternatives);
2. Implement the FWS and FWC approved standard manatee construction conditions (Appendix F) during all in-water construction phases of the project (both build alternatives);
3. Coordinate unavoidable wetland impacts with the state and federal permitting agencies (including review agencies) and provide appropriate mitigation to offset adverse impacts to wetland-dependent listed species habitat (both build alternatives);
4. All seagrass boundaries within the chosen build alternative will be marked prior to construction (both build alternatives);
5. Should the Rye Road Alternative be selected as the build alternative, the existing bridge structure will be surveyed for evidence of nesting by species protected by the MBTA. If present, Manatee County will re-initiate consultation with the FWS to minimize the potential for construction impacts to these species or their nests;
6. Prior to construction, Manatee County will survey appropriate habitats in the selected alternative for gopher tortoises, gopher tortoise commensal species, Florida burrowing owls, crested caracara, and Florida sandhill cranes. Manatee County will coordinate with FWS and/or FWC to minimize adverse effects to these species (both build alternatives); and
7. Should the Rye Road Alternative be selected as the build alternative, Manatee County will survey appropriate habitats for the presence of the Florida scrub jay and will coordinate appropriately with the FWS and FWC.
8. Prior to construction, Manatee County will survey appropriate habitats within the study area of the selected alternative for bald eagle and osprey nests. If present, the County will coordinate appropriately with the FWC and FWS (both build alternatives).

## Section 10.0

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Fort Hamer Bridge DEIS  
Biological Assessment

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**Appendix A**

*Agency Correspondence*

**APPENDIX A**  
**AGENCY CORRESPONDENCE**

<b><u>Date</u></b>	<b><u>Source</u></b>
10/03/01	Fish and Wildlife Service (FWS) to Florida Department of Transportation (FDOT)
05/06/10	URS Corporation (URS) to Florida Fish and Wildlife Conservation Commission (FWC)
05/06/10	URS to FWS
05/26/10	FWC to URS
07/09/10	Federal Register 39555 and 39556
07/19/10	U.S. Coast Guard (USCG) Project Scoping Meeting Notification
07/20/10	USCG to FWS
07/20/10	USCG to National Marine Fisheries Service (NMFS) Southeast Regional Office
07/20/10	USCG to NMFS Protected Resources Division
07/20/10	USCG to NMFS Southeast Regional Office
07/20/10	USCG to U.S. Army Corps of Engineers (USACE)
07/20/10	USCG to USACE Jacksonville District Regulatory Branch
07/20/10	USCG to U.S. Environmental Protection Agency (EPA) Region 4 South Florida Office Urban Outreach
07/20/10	USCG to EPA Region 4 South Florida Office
07/27/10	NMFS to USCG
07/29/10	USACE to USCG
08/24/10	FWS to USCG
09/20/10	URS to FWC
09/24/10	FWC to URS (emails)





# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
6620 Southpoint Drive South  
Suite 310  
Jacksonville, Florida 32216-0912

IN REPLY REFER TO:  
FWS/R4/ES-JAFL

October 3, 2001

Ms. Gwen Pipkin  
Florida Department of Transportation  
801 N. Broadway  
Bartow, Florida 33830

**RECEIVED**  
OCT 09 2001

Re: Draft Wetland Evaluation Report  
FWS Log No: 01-1034 (2) (St. Pete)

Environmental Management  
Office

Dear Ms. Pipkin:

This is in response to your Draft Wetland Evaluation Report provided July 19, 2001, requesting our review and concurrence that the impacts proposed for the Upper Manatee River Road will not adversely impact federally listed species.

The project purpose is to improve north-south traffic circulation between I-75 and Rye Road/C.R. 675 and S.R. 64 and U.S. 301. Four potential corridors have been identified for the project; expansion of I-75, Upper Manatee River Road/Fort Hammer Road, Rye Road/C.R. 675, and Rye Road/Golf Course Road.

The Service finds that the report adequately describes the potential impacts to habitats in the project area. Compensatory mitigation is expected to be accomplished by the Southwest Florida Water Management District via the provisions of Florida Statute 373.4137.

The report discusses indirect impacts to vegetative communities that could be shaded by the bridge. The FDOT expects to mitigate for direct impacts to wetlands. The Service will comment on the appropriateness of the mitigation proposed for direct and indirect wetland impacts through the FDOT Mitigation Review process and the Corps' permitting process.

At this time the impacts to sea grasses are minimal and therefore are not likely to adversely affect critical habitat for the West Indian manatee (*Trichechus manatus*).

We appreciate the opportunity to comment. If you have any question please contact Shelley Norton, (727) 570-5398, extension 14.

Sincerely,

*Don Palmer*

for

Peter M. Benjamin  
Asst. Field Supervisor

S: palmer\01-1034(2)\acm\10.03.01



May 6, 2010

Ms. MaryAnn Poole  
Director of the Office of Policy and Stakeholder Coordination  
Florida Fish and Wildlife Conservation Commission  
2574 Seagate Drive, Suite 250  
Tallahassee, FL 32399

**Re: Fort Hamer Bridge, Manatee County, Florida**  
**URS Project No.: 12009385**  
**Protected Species Information Request**  
**Township 34 South, Range 19 East, Sections 5, 8, 17, 19, 20, 29, and 30**

Dear Ms. Poole:

URS Corporation Southern has been contracted by Manatee County to conduct an environmental assessment of a proposed bridge corridor across the Manatee River at Fort Hamer Road. The study area extends along the Upper Manatee River Road on the south side of the river to Fort Hamer Road on the north side of the river, in Manatee County, Florida (see attached location map).

In order to better assess potential impacts associated with the proposed project, we are asking for any pertinent information on state listed species and documented bald eagle nest sites that may occur within one mile of the project area shown on the attached map.

We appreciate your assistance with this request. If you have any questions, need additional information, or would like to discuss this request, please call me at (813) 675-6631 or email me at [Terry\\_Cartwright@URSCorp.com](mailto:Terry_Cartwright@URSCorp.com).

Sincerely,

**URS Corporation Southern**

Terry Cartwright

Enclosure

cc: Daren Carriere, URS

URS Corporation  
7650 West Courtney  
Campbell Causeway  
Tampa, FL 33607-1462  
Tel: 813.286.1711  
Fax: 813.287.8591



May 6, 2010

Mr. Todd Mecklenborg  
Fish and Wildlife Biologist  
U.S. Fish and Wildlife Service  
600 Fourth Street South  
St. Petersburg, FL 33701

**Re: Fort Hamer Bridge, Manatee County, Florida**  
**URS Project No.: 12009385**  
**Protected Species Information Request**  
**Township 34 South, Range 19 East, Sections 5, 8, 17, 19, 20, 29, and 30**

Dear Mr. Mecklenborg:

URS Corporation Southern has been contracted by Manatee County to conduct an environmental assessment of a proposed bridge corridor across the Manatee River at Fort Hamer Road. The study area extends along the Upper Manatee River Road on the south side of the river to Fort Hamer Road on the north side of the river, in Manatee County, Florida (see attached location map).

In order to better assess potential impacts associated with the proposed project, we are asking for any pertinent information on wildlife habitat and federally listed species or candidate species that may occur within one mile of the project area shown on the attached map. In addition, please provide any information on wood stork rookeries that may occur within a 15-mile radius of the proposed project.

We appreciate your assistance with this request. If you have any questions, need additional information, or would like to discuss this request, please call me at (813) 675-6631 or email me at [Terry\\_Cartwright@URSCorp.com](mailto:Terry_Cartwright@URSCorp.com).

Sincerely,

**URS Corporation Southern**

Terry Cartwright

Enclosure

cc: Daren Carriere, URS

URS Corporation  
7650 West Courtney  
Campbell Causeway  
Tampa, FL 33607-1462  
Tel: 813.286.1711  
Fax: 813.287.8591

May 26, 2010

Mr. Terry Cartwright  
URS Corporation  
7650 W. Courtney Campbell Causeway  
Tampa, Florida 33607-1462

Dear Mr. Cartwright:

This letter is in response to your request for listed species occurrence records and critical habitats for your project (URS No. 12009385) located in Manatee County, Florida. Records from The Florida Fish and Wildlife Conservation Commission's database indicate that listed species occurrence data are located within or adjacent to the project area. Enclosed are 8.5 x 11 maps showing listed species locations, SHCA's for the short-tailed kite and Cooper's hawk, prioritized SHCA's, species richness, priority wetlands for listed species, and land cover for the project area.

This letter and attachments should not be considered as a review or an assessment of the impact upon threatened or endangered species of the project site. It provides FWC's most current data regarding the location of listed species and their associated habitats.

Our SHCA recommendations are intended to be used as a guide. Land development and ownership in Florida is ever-changing and priority areas identified as SHCA might already have been significantly altered due to development or acquired into public ownership. Onsite surveys, literature reviews, and coordination with FWC biologists remain essential steps in documenting the presence or absence of rare and imperiled species and habitats within the project area.

Our fish and wildlife location data represents only those occurrences recorded by FWC staff and other affiliated researchers. It is important to understand that our database does not necessarily contain records of all listed species that may occur in a given area. Also, data on certain species, such as gopher tortoises, are not entered into our database on a site-specific basis. **Therefore, one should not assume that an absence of occurrences in our database indicates that species of significance do not occur in the area.**

The Florida Natural Areas Inventory (FNAI) maintains a separate database of listed plant and wildlife species, please contact FNAI directly for specific information on the location of element occurrences within the project area. Because FNAI is funded to provide information to public agencies only, you may be required to pay a fee for this information. County-wide listed species information can be located at their website (<http://www.fnai.org>).

Please credit the Florida Fish and Wildlife Conservation Commission in any publication or presentation of these data. If you have any questions or further requests, please contact me at (850) 488-0588 or [gisrequests@myfwc.com](mailto:gisrequests@myfwc.com).

Sincerely,



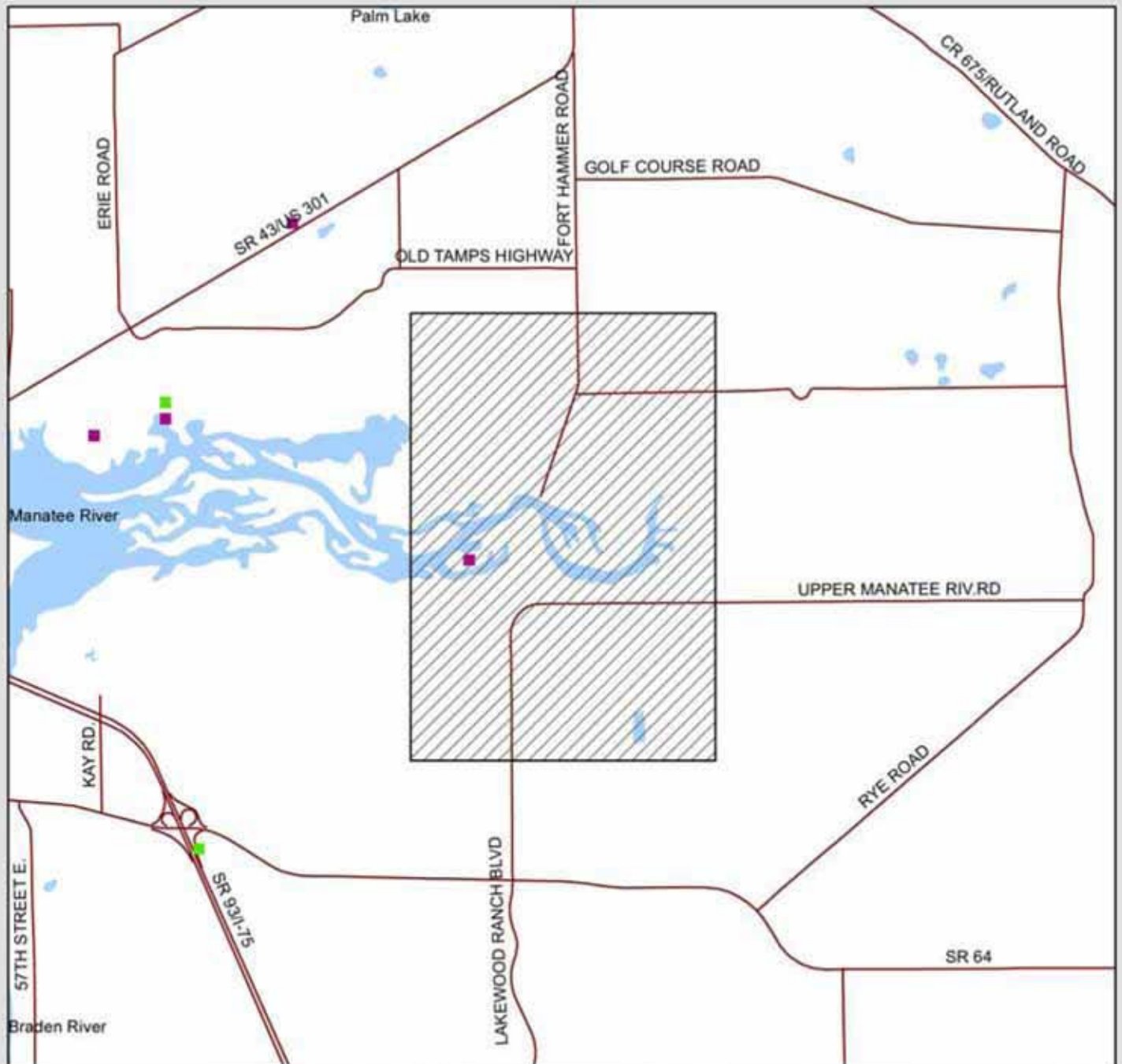
Jan Stearns  
Staff Assistant

js  
2010\_5524  
Enclosures



# Species Occurrence

## URS Project No.: 12009385



- Eagles Nests
- Florida Natural Inventory Areas
- County Boundary
- Project Site

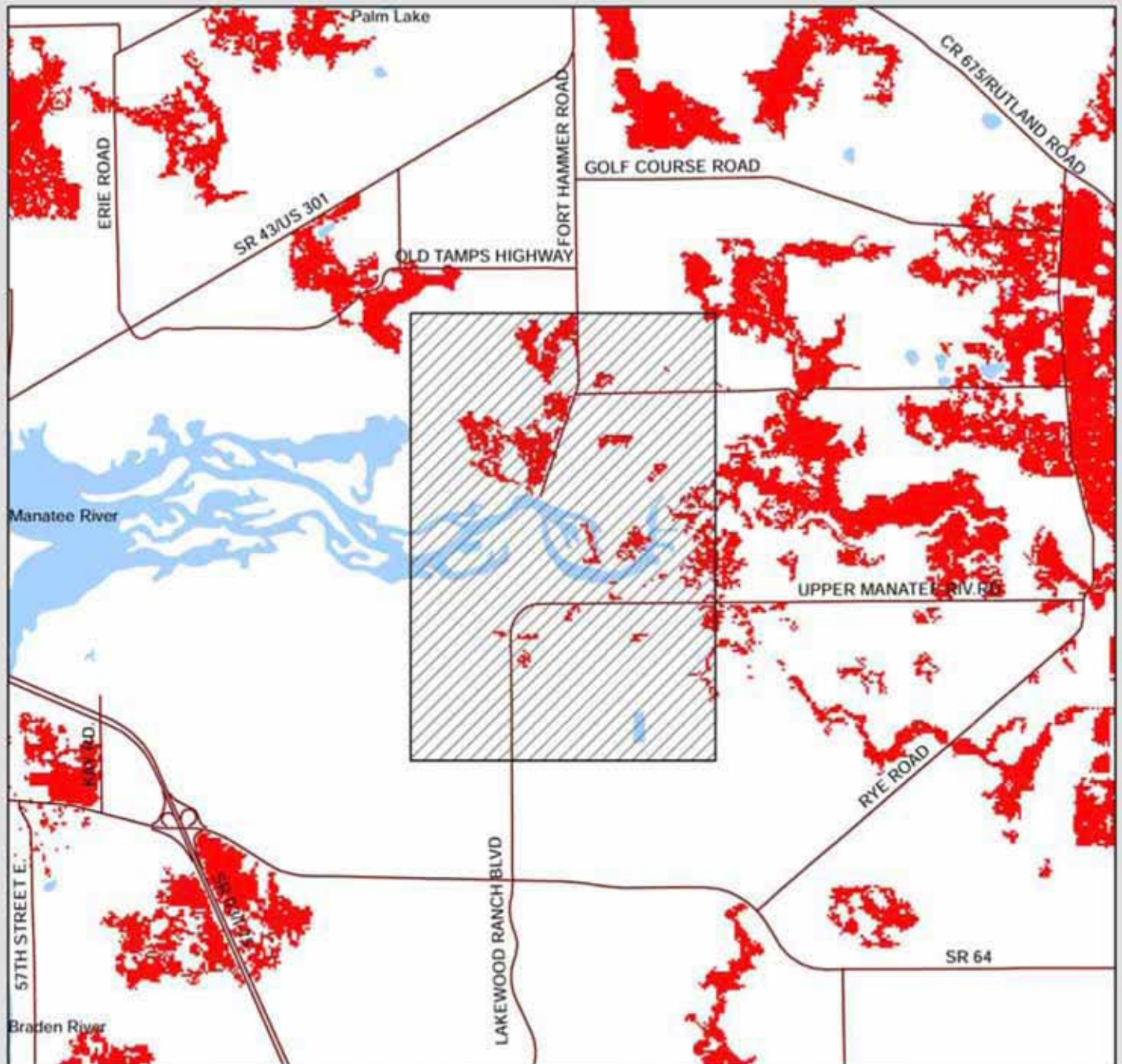


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# Strategic Habitat Conservation Areas

URS Project No.: 12009385



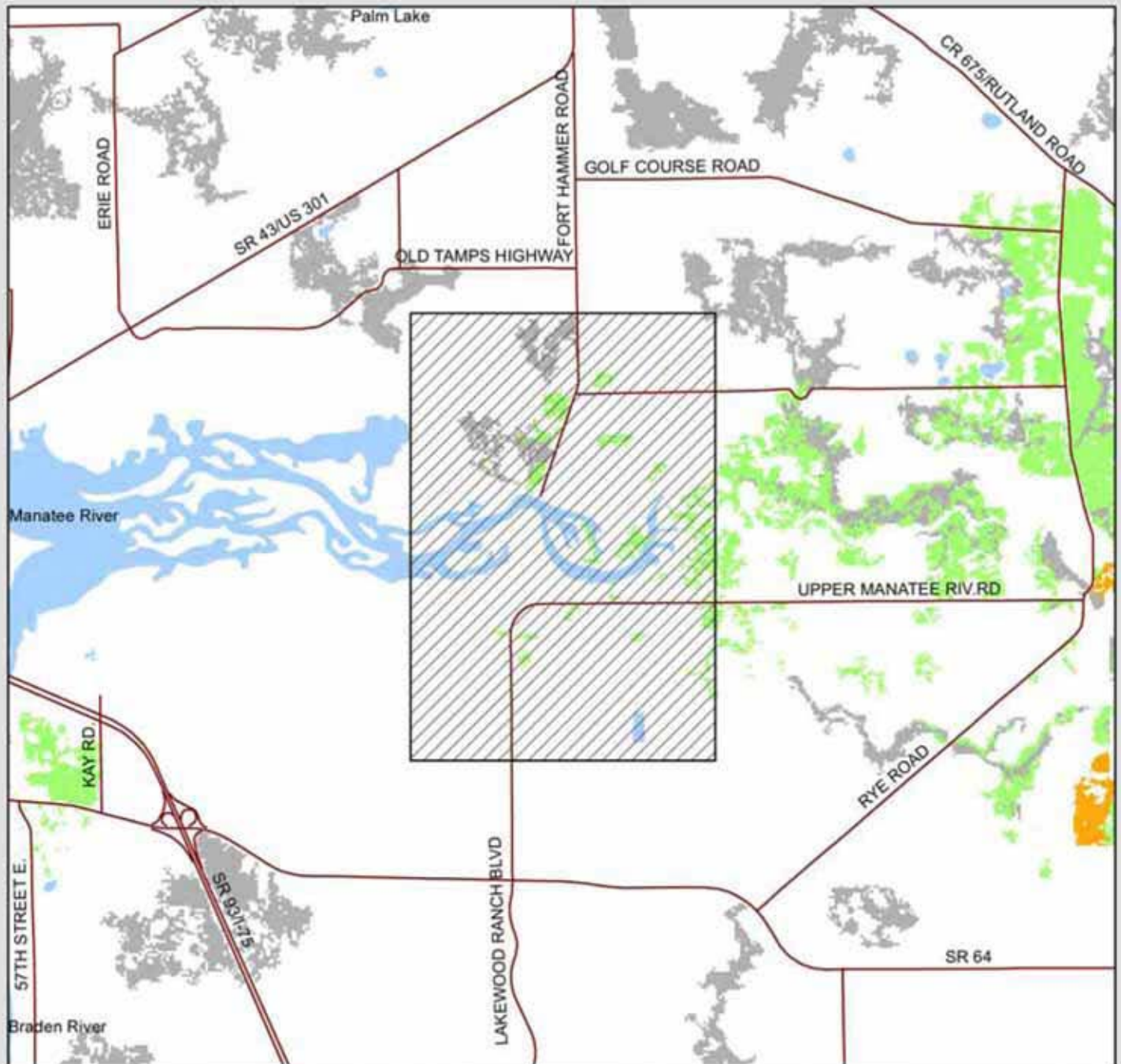
- Strategic Habitat Conservation Areas
- County Boundary
- Project Site



2010\_5524

# Prioritized SHCA's

## URS Project No.: 12009385



- Prioritized SHCA's**
- Priority 1
  - Priority 2
  - Priority 3
  - Priority 4
  - Priority 5
- County Boundary
- Project Site



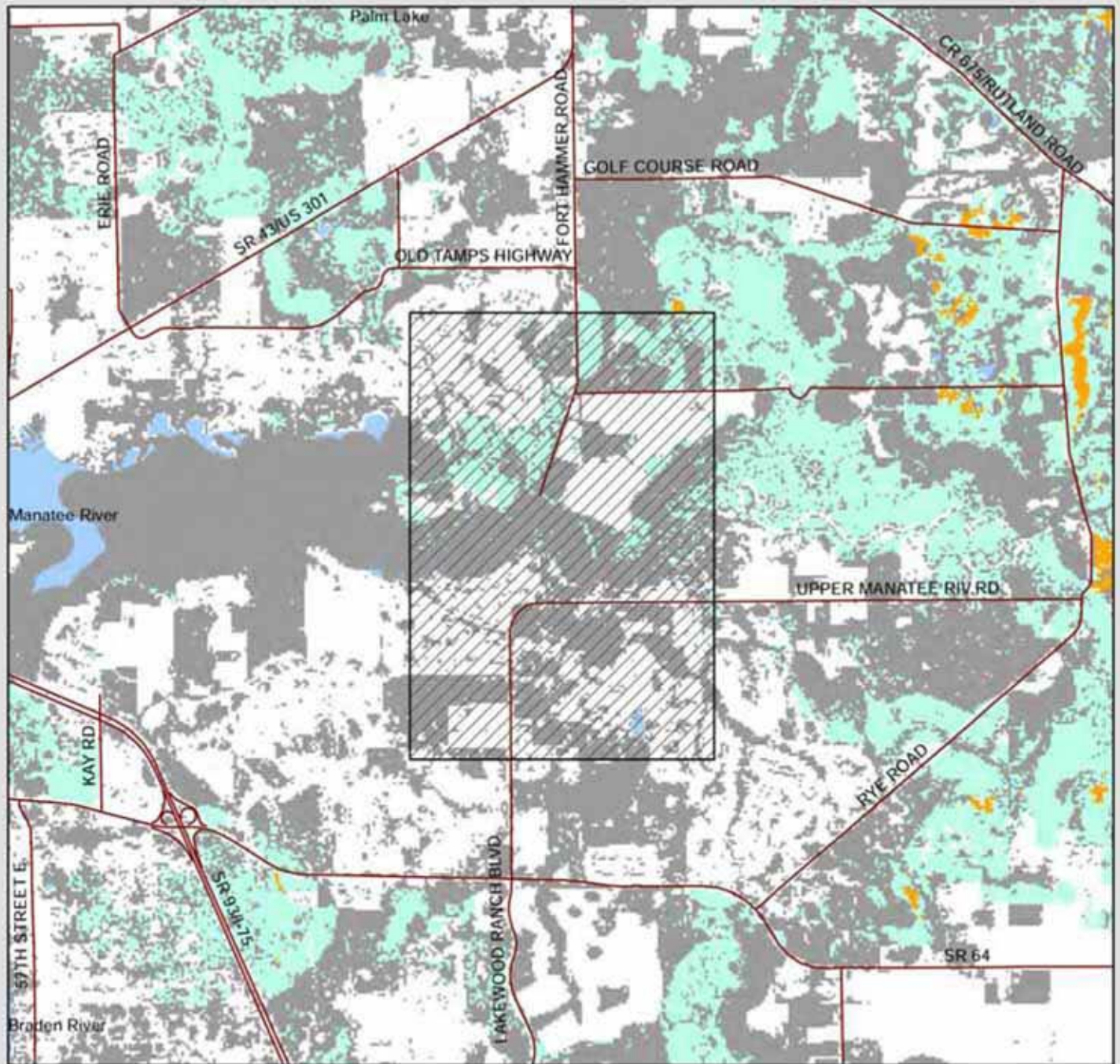
The prioritized SHCA map identifies 5 classes of SHCA based upon Heritage ranking criteria developed by The Nature Conservancy, the Natural Heritage Program Network, and the Florida Natural Areas Inventory. There are 2 possible ranks used to prioritize a species' SHCA: 1) the global rank based on a species worldwide status, and 2) the state rank based upon the species status in Florida. The state and global ranks are based upon many factors such as known occurrence locations, estimated abundance, range, amount of habitat currently protected, perceived levels of threats towards the species, and ecological fragility.

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# Species Richness

URS Project No.: 12009385

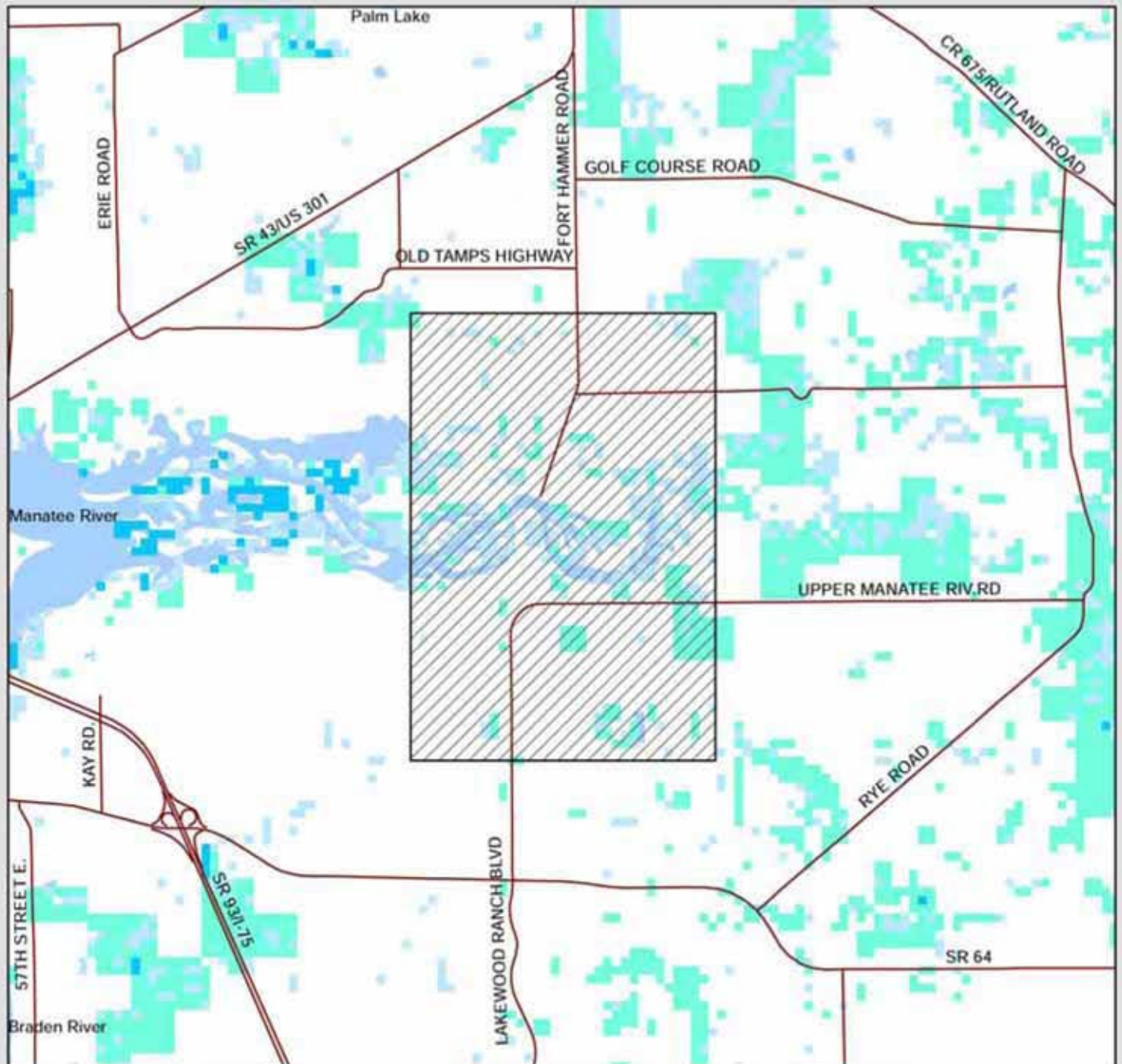


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# Priority Wetlands

URS Project No.: 12009385



## Priority Wetlands

- 1-3 species, upland habitat
- 1-3 species, wetland habitat
- 4-6 species, upland habitat
- 4-6 species, wetland habitat
- 7-9 species, wetland habitat

- County Boundary
- Project Site

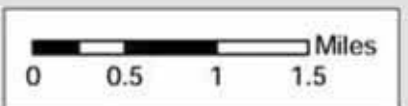
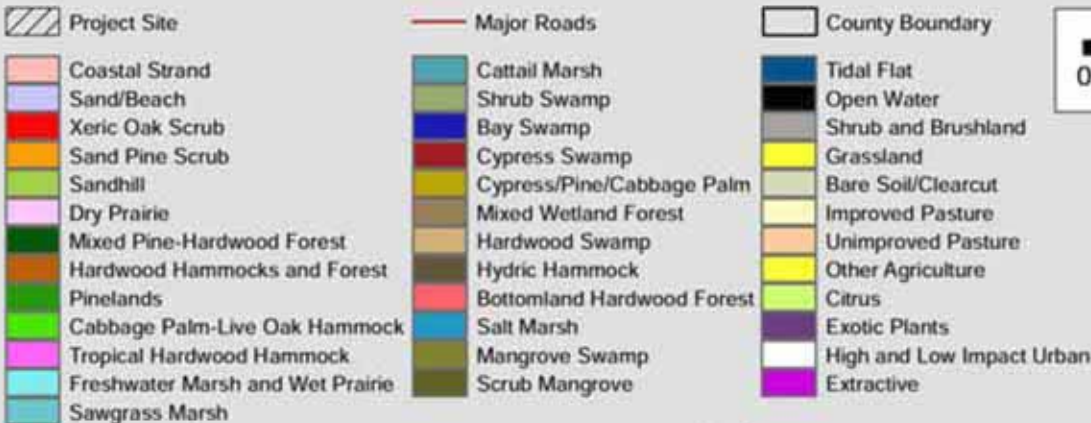
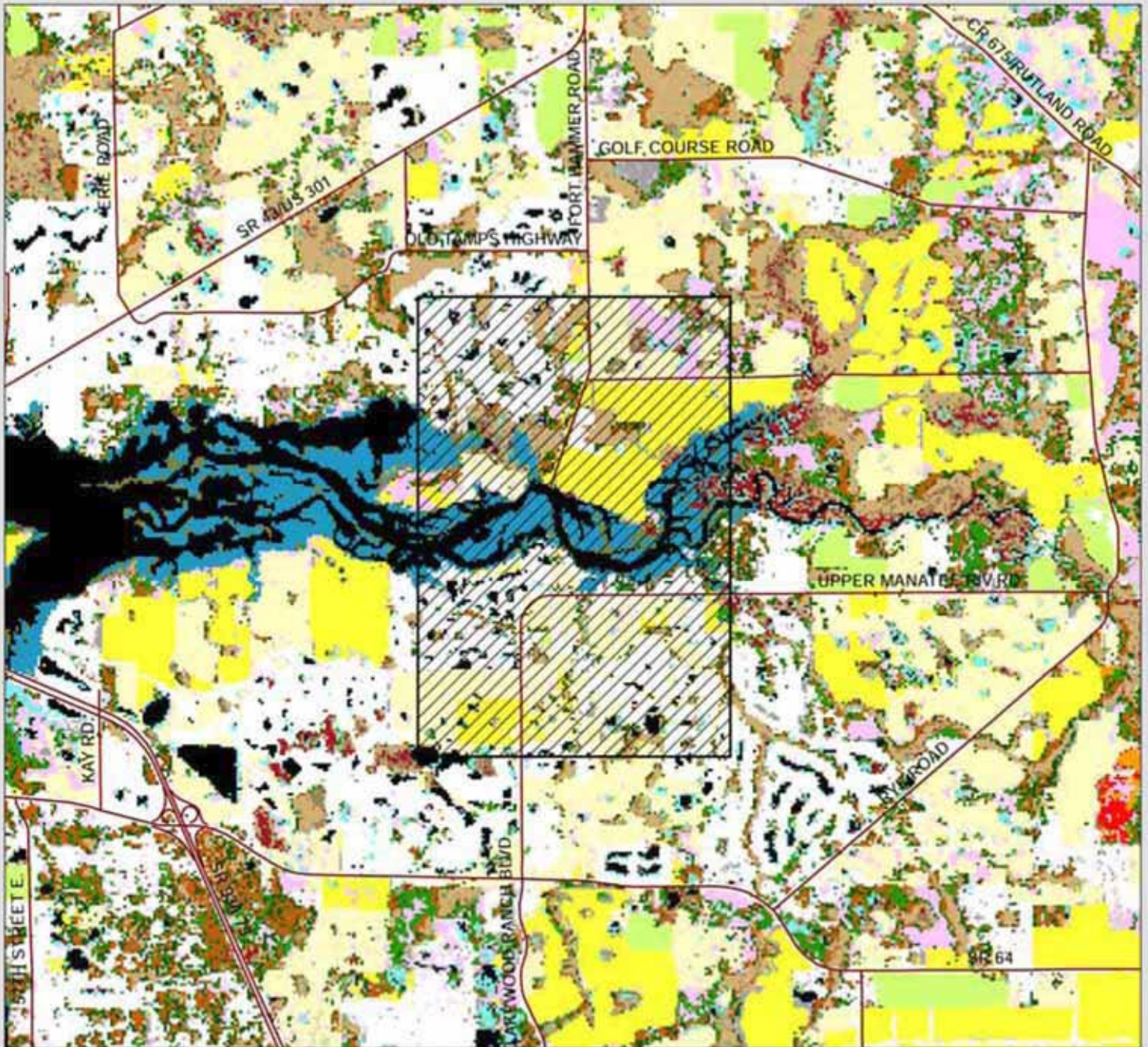


2010\_5524



# Florida Land Cover - 2003

## URS Project No.:12009385



2010\_5524



# DEPARTMENT OF HOMELAND SECURITY

## Coast Guard

[Docket No. USCG-2010-0455]

### Environmental Impact Statement; Fort Hamer Bridge, Manatee County, FL

**AGENCY:** Coast Guard, DHS.

**ACTION:** Notice of intent to prepare a National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS); request for comments; notice of public scoping meeting.

**SUMMARY:** The U.S. Coast Guard announces its intent to prepare an EIS for a proposed new bridge (Fort Hamer Bridge) crossing over the Manatee River in Manatee County, Florida. The proposed location for the Fort Hamer Bridge is in northeast Manatee County adjacent to Fort Hamer Park and will connect Fort Hamer Road and Upper Manatee River Road.

We request your comments on environmental concerns related to a new bridge over the Manatee River in Manatee County, Florida. This includes suggesting analyses, methodologies and possible sources of data or information related to a new bridge.

The Coast Guard will hold a public scoping meeting for citizens to provide oral and written comments relating to the proposed Fort Hamer Bridge and the preparation of an EIS. This meeting will be open to the public.

**DATES:** *Comment period:* Comments and related material must either be submitted to our online docket via <http://www.regulations.gov> on or before August 23, 2010, or reach the Docket Management Facility by that date.

*Public meeting:* A public scoping meeting will be held on Tuesday, August 17, from 4 p.m. to 8 p.m. to provide an opportunity for oral comments. If you would like to make an oral presentation at the meeting or submit written materials as part of the meeting record please provide your information identified by docket number USCG-2010-0455 to either the online docket via <http://www.regulations.gov> or the Docket Management Facility no later than August 3, 2010 using any one of the four methods listed under addresses. Requests to make oral comments or to submit written comments and related material may also be submitted to Coast Guard personnel specified at that meeting.

**ADDRESSES:** The public scoping meeting will be held at the Carlos E. Haile Middle School, 9501 E. State Road 64,

Bradenton, Florida 34212-7240 and can be contacted at (941) 714-7240.

You may submit written comments identified by docket number USCG-2010-0455 using any one of the following methods:

(1) *Federal eRulemaking Portal:*

<http://www.regulations.gov>.

(2) *Fax:* 202-493-2251.

(3) *Mail:* Docket Management Facility (M-30), U.S. Department of Transportation, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590-0001.

(4) *Hand delivery:* Same as mail address above, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The telephone number is 202-366-9329.

To avoid duplication, please use only one of these methods. For instructions on submitting comments, see the "Public Participation and Request for Comments" portion of the **SUPPLEMENTARY INFORMATION** section below.

**FOR FURTHER INFORMATION CONTACT:** If you have questions regarding this notice, please contact Mr. Randall Overton, U.S. Coast Guard, telephone 305-415-6749, e-mail [randall.d.overton@uscg.mil](mailto:randall.d.overton@uscg.mil). If you have questions on viewing or submitting material to the docket, call Ms. Renee V. Wright, Program Manager, Docket Operations, telephone 202-366-9826.

#### **SUPPLEMENTARY INFORMATION:**

##### **Public Participation and Request for Comments**

We encourage you to participate in the scoping process by submitting comments and related material. The purpose of the scoping process is to ensure that the full range of issues related to the proposed action are addressed, and all significant issues identified, comments and suggestions are invited from all interested parties. All comments received will be posted, without change, to <http://www.regulations.gov> and will include any personal information you have provided.

*Submitting comments:* If you submit a comment, please include the docket number for this notice (USCG-2010-0455) and provide a reason for each suggestion or recommendation. We recommend that you include your name and a mailing address, an e-mail address, or a telephone number in the body of your document so that we can contact you if we have questions regarding your submission. You may submit your comments and material online, or by fax, mail or hand delivery, but please use only one of these means.

To submit your comment online, go to <http://www.regulations.gov>, click on the "submit a comment" box, which will then become highlighted in blue. In the "Document Type" drop down menu select "Notices" and insert "USCG-2010-0455" in the "Keyword" box. Click "Search" then click on the balloon shape in the Actions column. If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and electronic filing. If you submit them by mail and would like to know that they reached the Facility, please enclose a stamped, self-addressed postcard or envelope. We will consider all comments and material received during the comment period.

*Viewing the comments:* To view the comments as well as documents submitted to the docket go to <http://www.regulations.gov>, click on the "read comments" box, which will then become highlighted in blue. In the "Keyword" box insert USCG-2010-0455 and click "Search." Click the "Open Docket Folder" in the "Actions" column. You may also view the docket online by visiting the Docket Management Facility in Room W12-140 on the ground floor of the Department of Transportation West Building, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. We have an agreement with the Department of Transportation to use the Docket Management Facility.

*Privacy Act:* Anyone can search the electronic form of comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review a Privacy Act, system of records notice regarding our public dockets in the January 17, 2008 issue of the **Federal Register** (73 FR 3316).

*Information on service for individuals with disabilities:* For information on facilities or services for individuals with disabilities or to request special assistance at the public meeting contact Mr. Randall Overton, U.S. Coast Guard, telephone 305-415-6749, e-mail [randall.d.overton@uscg.mil](mailto:randall.d.overton@uscg.mil).

#### **Background and Purpose**

The proposed bridge crossing is a priority project in the Financially Feasible Plan of the Sarasota-Manatee Metropolitan Planning Organization's (SMMPO) 2030 Long Range Transportation Plan. The project's Web site is <http://www.forthamerbridge.com>. According to the SMMPO, the proposed bridge is needed to provide an alternate

north/south route to the east of Interstate Highway 75 (I-75) and enhance emergency service access to northeast Manatee County. Further, a new bridge will serve to improve the level of service to the existing network of north Manatee County roadways as development expands through the Parrish area and northward in Manatee County. The proposed location for the Fort Hamer Bridge is in northeast Manatee County adjacent to Fort Hamer Park and will connect Fort Hamer Road and Upper Manatee River Road.

Alternatives under consideration include: (1) Taking no action; and (2) various build alternatives that satisfy the purpose and need. Build alternatives may include low, mid, and high-level fixed bridges, alternatives to the east, west and center of the project corridor, and other alternatives that may result from the scoping process. We are requesting your comments on environmental concerns that you may have related to a new bridge in northeast Manatee County. This includes suggesting analyses and methodologies for use in the EIS or possible sources of data or information we should consider.

#### Public Scoping Meeting

The Public Scoping Meeting is open to the public and will start with an informal open house, followed by an overview presentation and a formal public comment period.

At the open house, Coast Guard personnel will be available to provide more information about the National Environmental Policy Act (NEPA), EIS process, and the Fort Hamer Bridge design project. Project graphics providing basic information about the project and the NEPA EIS process will be on display during the informal portion of the meeting.

Attendees at the meeting, who wish to present testimony and have not previously made a request to do so, will follow those having submitted a request, as time permits. If a large number of persons wish to speak, the presiding officer may limit the time allotted to each speaker. Conversely, the public meeting may end early if all present wishing to speak have done so.

A court reporter will be present during both the informal open house and the formal public comment period to record verbal comments from the public. The public can submit written comments related to the EIS and the proposed action at any time during the meeting. Verbal comments will be recorded and transcribed, and the transcription will be placed in the public docket along with any written

statements that may be submitted during the meeting. These comments and statements will be addressed by the Coast Guard as part of the EIS.

#### Scoping Process

Public scoping is an early and open process for determining the scope of issues to be addressed in this EIS and for identifying the issues related to the proposed action that may have a significant effect on the project environment. The scoping process begins with publication of this notice and ends after the Coast Guard has:

- Invited the participation of Federal, State, and local agencies, any affected Indian tribe, and other interested persons;

- Requested the Environmental Protection Agency, the United States Fish and Wildlife Service, the National Marine Fisheries Service, the Federal Highway Administration, and the United States Army Corps of Engineers to serve as cooperating agencies in the preparation of this EIS. With this Notice of Intent, we are asking Federal, State, and local agencies with jurisdiction or special expertise with respect to environmental issues in the project area, in addition to those we have already contacted, to formally cooperate with us in the preparation of this EIS;

- Determined the scope and the issues to be analyzed in depth in the EIS;

- Allocated responsibility for preparing the EIS components;

- Indicated any related environmental assessments or environmental impact statements that are not part of this EIS;

- Identified other relevant environmental review and consultation requirements, such as Coastal Zone Management Act consistency determinations, and threatened and endangered species and habitat impacts;

- Indicated the relationship between timing of the environmental review and other aspects of the application process; and

- Exercised our option under 40 CFR 1501.7(b) to hold the public scoping meeting announced in this notice.

Once the scoping process is complete, the Coast Guard will prepare a draft EIS, and we will publish a **Federal Register** notice announcing its public availability. If you wish to be mailed or e-mailed the announcement of the EIS's notice of availability, please contact the person named in **FOR FURTHER**

**INFORMATION CONTACT** or send a request to be added to our contact mailing list along with your name and mailing address or an e-mail address online, by fax, mail, or hand delivery according to

the "Submitting comments" instructions above. Please include the docket number for this notice (USCG-2010-0455) in your request. If you provide comments on this notice, we will automatically add your contact information to our contact mailing list and you will automatically be sent an announcement of the draft EIS's notice of availability. We will provide the public with an opportunity to review and comment on the draft EIS. After the Coast Guard considers those comments, we will prepare the final EIS and similarly announce its availability and solicit public review and comment.

Dated: July 2, 2010.

**Dana A. Goward,**

*Director, Office of Assessment, Integration and Risk Management.*

[FR Doc. 2010-16721 Filed 7-8-10; 8:45 am]

**BILLING CODE 9110-04-P**

## DEPARTMENT OF HOMELAND SECURITY

### U.S. Citizenship and Immigration Services

[CIS No. 2489-09; DHS Docket No. USCIS 2010-0032]

**RIN 1615-ZA95**

#### Extension of the Designation of El Salvador for Temporary Protected Status and Automatic Extension of Employment Authorization Documentation for Salvadoran TPS Beneficiaries

**AGENCY:** U.S. Citizenship and Immigration Services, Department of Homeland Security (DHS).

**ACTION:** Notice.

**SUMMARY:** This Notice announces that the Secretary of Homeland Security has extended the designation of El Salvador for temporary protected status (TPS) for 18 months from its current expiration date of September 9, 2010, through March 9, 2012. This Notice also sets forth procedures necessary for nationals of El Salvador (or aliens having no nationality who last habitually resided in El Salvador) with TPS to re-register and to apply for an extension of their employment authorization documents (EADs) with U.S. Citizenship and Immigration Services (USCIS). Re-registration is limited to persons who previously registered for TPS under the designation of El Salvador and whose applications have been granted or remain pending. Certain nationals of El Salvador (or aliens having no nationality who last habitually resided in El Salvador) who have not previously





16475/3889  
1928  
July 19, 2010

### **PROJECT SCOPING MEETING NOTIFICATION**

**Subject: Project Name: Fort Hamer Bridge, Manatee River Crossing**  
**Project Limits: From approximately 900 feet north of Waterlefe Boulevard on Upper Manatee River Road to 1,600 feet south of Mulholland Road on Fort Hamer Road**  
**County/State: Manatee County, Florida**  
**USCG Docket Number: USCG-2010-0455**

The United States Coast Guard (USCG), in conjunction with Manatee County (County), is preparing an Environmental Impact Statement (EIS) on the above referenced project. This letter is an invitation for you or someone from your agency to attend a scoping meeting. The scoping meeting will be held on Tuesday, August 17, 2010 from 4 p.m. to 8 p.m. at Carlos E. Haile Middle School, 9501 E. State Road 64, Bradenton, Florida 34212-7240.

The purpose of this scoping meeting is to:

1. Determine the scope and significance of issues and the degree of analysis required for the EIS. This will also include identification of the range of alternatives and potential impacts to be evaluated.
2. Identify issues which are not significant or which have been covered by prior environmental studies and eliminate them from detailed study. This would narrow discussion in the EIS to a brief description of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.
3. Allocate assignments for sections of the EIS among lead and cooperating agencies with the lead agency (USCG) retaining responsibility for the EIS preparation.
4. Identify any environmental assessments or impact statements, which are being prepared and are related to, but are not part of, the scope of the EIS under consideration.
5. Identify other environmental review and consultation requirements so the lead and cooperating agencies may prepare other required analyses and studies concurrently with, and integrated with, the EIS. Examples of additional requirements include surveys and studies required by the National Historic Preservation Act and the Endangered Species Act.
6. Identify permits, licenses, or entitlements that will be necessary.
7. Determine the relationship between the timing of the preparation of environmental analyses and the agency's tentative planning and decision-making schedule.



16475/3889  
July 19, 2010

URS Corporation Southern of Tampa, Florida has been retained by the County to develop the EIS and conceptual design features for the proposed project.

The proposed improvements would involve a new bridge crossing over the Manatee River in Manatee County, Florida. The project limits extend from approximately 900 feet north of Waterlefe Boulevard on Upper Manatee River Road to 1600 feet south of Mulholland Road on Fort Hamer Road

Alternatives that have been considered or are currently under consideration include:

1. Taking no action;
2. Constructing a low, mid, or high-level bridge;
3. Alternatives to the east, west and center of the project corridor; and
4. Alternate corridors.

The proposed bridge will provide an alternate north/south route to the east of Interstate Highway 75 (I-75) and enhance emergency service access to northeast Manatee County. The proposed bridge will improve the level of service to north Manatee County roadways as development expands through the Parrish area and northward in Manatee County.

This formal scoping meeting is necessary to aid the USCG and the County in project development and to increase interagency awareness of concerns. An agenda and project location map are enclosed to assist you in studying this project and outlining potential issues. If you have any questions prior to the meeting please contact: Randall Overton, U.S. Coast Guard, telephone 305-415-6749, e-mail [randall.d.overton@uscg.mil](mailto:randall.d.overton@uscg.mil).

Your agency's participation and cooperation in this preliminary issues identification effort is highly encouraged, and the USCG would appreciate being notified by August 3, 2010 whether your agency will attend this meeting.

Sincerely,



BARRY DRAGON  
Director, District Bridge Program  
U.S. Coast Guard

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commander (dpb)  
Seventh Coast Guard District

909 SE 1st Ave (Suite 432)  
Miami, FL 33131-3050  
Staff Symbol: dpb  
Phone: 305-415-6749  
Fax: 305-415-6763  
Email: randall.d.overton@uscg.mil

16475/3889  
1932  
July 20, 2010

Ms. Linda Walker, Deputy Field Supervisor  
U.S. Fish and Wildlife Service  
7915 Baymeadows Way, Suite 200  
Jacksonville, FL 32256-7517

Re: Invitation to be a Cooperating Agency on an Environmental Impact Statement for the  
proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida.

Dear Ms. Walker:

The United States Coast Guard (USCG), in conjunction with Manatee County (County), is preparing an Environmental Impact Statement (EIS) for the proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida. In accordance with 40 CFR 1501.6, the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provision of the National Environmental Policy Act, we are requesting you be a Cooperating Agency on this environmental document. This request is based on your Protected Resources and Habitat Conservation Jurisdiction. Designation as a Cooperating Agency does not imply that your agency supports the proposed project.

The proposed bridge crossing is a priority project in the Financially Feasible Plan of the Sarasota-Manatee Metropolitan Planning Organization's (SMMPO) 2030 Long Range Transportation Plan. The project's Web site is <http://www.forthamerbridge.com>. According to the SMMPO, the proposed bridge is needed to provide an alternate north/south route to the east of Interstate Highway 75 (I-75) and enhance emergency service access to northeast Manatee County. Further, a new bridge will serve to improve the level of service to the existing network of north Manatee County roadways as development expands through the Parrish area and northward in Manatee County. The proposed location for the Fort Hamer Bridge is in northeast Manatee County adjacent to Fort Hamer Park and will connect Fort Hamer Road and Upper Manatee River Road. Alternatives under consideration include: (1) Taking no action; and (2) various build alternatives that satisfy the purpose and need. Build alternatives may include low, mid, and high-level fixed bridges, alternatives to the east, west and center of the project corridor, and other alternatives that may result from the scoping process. We are requesting your comments on environmental concerns that you may have related to a new bridge in northeast Manatee County. This includes suggesting analyses and methodologies for use in the EIS or possible sources of data or information we should consider.

Your agency's involvement as a Cooperating Agency should entail those areas under its jurisdiction. Responsibilities of a Cooperating Agency include:

- Participation in the NEPA scoping and environmental review process at the earliest possible time.
- Providing comments on the project's purpose and need, goals and objectives, methodologies, and range of alternatives.
- Assisting in the development of a project coordination plan, including a project schedule.
- Providing (on request of the lead agency) information and assisting with the preparation of environmental analyses including portions of the NEPA documents relevant to your agency's jurisdiction or area of special expertise.
- Providing staff support at the lead agency's request to enhance the latter's interdisciplinary capability.
- Identifying, as early as practicable, any issues that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the transportation project.

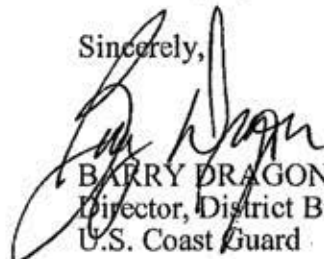
In response to a lead agency's request for assistance in preparing an environmental impact statement, a Cooperating Agency may reply that other program commitments preclude any involvement or their degree of involvement.

As a Cooperating Agency, you should expect the NEPA document to enable you to discharge your jurisdictional responsibilities. Likewise, you have the obligation to tell us if, at any point in the process, your agency's requirements are not being met. We expect that, at the end of the NEPA process, the Environmental Impact Statement will satisfy your NEPA requirements including those related to project alternatives, environmental consequences and mitigation. Further, we intend to utilize the Environmental Impact Statement and our subsequent Record of Decision as our decision-making documents.

We look forward to your response to our request for your agency to be a Cooperating Agency and to working with you on this project. The favor of a reply is requested by 12 August 2010. If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of this Environmental Impact Statement, please contact Randall D. Overton, USCG, Federal Permit Agent, at [randall.d.overton@uscg.mil](mailto:randall.d.overton@uscg.mil) or 305-415-6749.

Thank you for your cooperation and interest in this project.

Sincerely,



BARRY DRAGON  
Director, District Bridge Program  
U.S. Coast Guard

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commander (dpb)  
Seventh Coast Guard District

909 SE 1st Ave (Suite 432)  
Miami, FL 33131-3050  
Staff Symbol: dpb  
Phone: 305-415-6749  
Fax: 305-415-6763  
Email: randall.d.overton@uscg.mil

16475/3889  
1932  
July 20, 2010

David Rydene, Ph.D.  
National Marine Fisheries Service  
Southeast Regional Office  
263 13th Avenue South  
St. Petersburg, FL 33701

Re: Invitation to be a Cooperating Agency on an Environmental Impact Statement for the proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida.

Dear Doctor Rydene:

The United States Coast Guard (USCG), in conjunction with Manatee County (County), is preparing an Environmental Impact Statement (EIS) for the proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida. In accordance with 40 CFR 1501.6, the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provision of the National Environmental Policy Act, we are requesting you be a Cooperating Agency on this environmental document. This request is based on your Protected Resources and Habitat Conservation Jurisdiction. Designation as a Cooperating Agency does not imply that your agency supports the proposed project.

The proposed bridge crossing is a priority project in the Financially Feasible Plan of the Sarasota-Manatee Metropolitan Planning Organization's (SMMPO) 2030 Long Range Transportation Plan. The project's Web site is <http://www.forthamerbridge.com>. According to the SMMPO, the proposed bridge is needed to provide an alternate north/south route to the east of Interstate Highway 75 (I-75) and enhance emergency service access to northeast Manatee County. Further, a new bridge will serve to improve the level of service to the existing network of north Manatee County roadways as development expands through the Parrish area and northward in Manatee County. The proposed location for the Fort Hamer Bridge is in northeast Manatee County adjacent to Fort Hamer Park and will connect Fort Hamer Road and Upper Manatee River Road. Alternatives under consideration include: (1) Taking no action; and (2) various build alternatives that satisfy the purpose and need. Build alternatives may include low, mid, and high-level fixed bridges, alternatives to the east, west and center of the project corridor, and other alternatives that may result from the scoping process. We are requesting your comments on environmental concerns that you may have related to a new bridge in northeast Manatee County. This includes suggesting analyses and methodologies for use in the EIS or possible sources of data or information we should consider.



July 20, 2010

Your agency's involvement as a Cooperating Agency should entail those areas under its jurisdiction. Responsibilities of a Cooperating Agency include:

- Participation in the NEPA scoping and environmental review process at the earliest possible time.
- Providing comments on the project's purpose and need, goals and objectives, methodologies, and range of alternatives.
- Assisting in the development of a project coordination plan, including a project schedule.
- Providing (on request of the lead agency) information and assisting with the preparation of environmental analyses including portions of the NEPA documents relevant to your agency's jurisdiction or area of special expertise.
- Providing staff support at the lead agency's request to enhance the latter's interdisciplinary capability.
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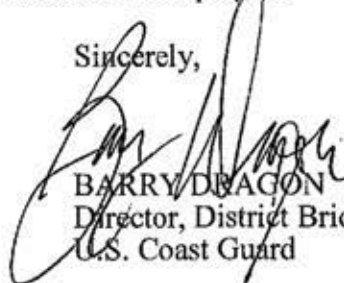
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Thank you for your cooperation and interest in this project.

Sincerely,



BARRY DRAGON  
Director, District Bridge Program  
U.S. Coast Guard

**U.S. Department of  
Homeland Security**

**United States  
Coast Guard**



Commander (dpb)  
Seventh Coast Guard District

909 SE 1st Ave (Suite 432)  
Miami, FL 33131-3050  
Staff Symbol: dpb  
Phone: 305-415-6749  
Fax: 305-415-6783  
Email: randall.d.overton@uscg.mil

16475/3889  
1932  
July 20, 2010

Mr. David Bernhart Assistant Administrator  
National Marine Fisheries Service  
Protected Resources Division  
263 13th Avenue South  
St. Petersburg, FL 33701

Re: Invitation to be a Cooperating Agency on an Environmental Impact Statement for the  
proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida.

Dear Mr. Bernhart:

The United States Coast Guard (USCG), in conjunction with Manatee County (County), is preparing an Environmental Impact Statement (EIS) for the proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida. In accordance with 40 CFR 1501.6, the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provision of the National Environmental Policy Act, we are requesting you be a Cooperating Agency on this environmental document. This request is based on your Protected Resources and Habitat Conservation Jurisdiction. Designation as a Cooperating Agency does not imply that your agency supports the proposed project.

The proposed bridge crossing is a priority project in the Financially Feasible Plan of the Sarasota-Manatee Metropolitan Planning Organization's (SMMPO) 2030 Long Range Transportation Plan. The project's Web site is <http://www.forthamerbridge.com>. According to the SMMPO, the proposed bridge is needed to provide an alternate north/south route to the east of Interstate Highway 75 (I-75) and enhance emergency service access to northeast Manatee County. Further, a new bridge will serve to improve the level of service to the existing network of north Manatee County roadways as development expands through the Parrish area and northward in Manatee County. The proposed location for the Fort Hamer Bridge is in northeast Manatee County adjacent to Fort Hamer Park and will connect Fort Hamer Road and Upper Manatee River Road. Alternatives under consideration include: (1) Taking no action; and (2) various build alternatives that satisfy the purpose and need. Build alternatives may include low, mid, and high-level fixed bridges, alternatives to the east, west and center of the project corridor, and other alternatives that may result from the scoping process. We are requesting your comments on environmental concerns that you may have related to a new bridge in northeast Manatee County. This includes suggesting analyses and methodologies for use in the EIS or possible sources of data or information we should consider.

Your agency's involvement as a Cooperating Agency should entail those areas under its jurisdiction. Responsibilities of a Cooperating Agency include:

- Participation in the NEPA scoping and environmental review process at the earliest possible time.
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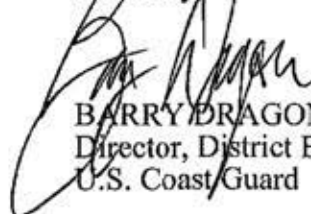
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Thank you for your cooperation and interest in this project.

Sincerely,



BARRY DRAGON  
Director, District Bridge Program  
U.S. Coast Guard

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commander (dpb)  
Seventh Coast Guard District

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16475/3889  
1932  
July 20, 2010

Mr. Roy Crabtree Administrator  
National Marine Fisheries Service  
Southeast Regional Office  
263 13th Avenue South  
St. Petersburg, FL 33701

Re: Invitation to be a Cooperating Agency on an Environmental Impact Statement for the  
proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida.

Dear Mr. Crabtree:

The United States Coast Guard (USCG), in conjunction with Manatee County (County), is preparing an Environmental Impact Statement (EIS) for the proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida. In accordance with 40 CFR 1501.6, the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provision of the National Environmental Policy Act, we are requesting you be a Cooperating Agency on this environmental document. This request is based on your Protected Resources and Habitat Conservation Jurisdiction. Designation as a Cooperating Agency does not imply that your agency supports the proposed project.

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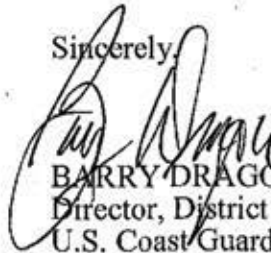
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Thank you for your cooperation and interest in this project.

Sincerely,



BARRY DRAGON  
Director, District Bridge Program  
U.S. Coast Guard

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Commander (dpb)  
Seventh Coast Guard District

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Fax: 305-415-6763  
Email: randall.d.overton@uscg.mil

16475/3889  
1932  
July 20, 2010

Mr. John Fellows  
U.S. Army Corps of Engineers  
10117 Princess Palm Avenue, Suite 120  
Tampa, FL 33610-8302

Re: Invitation to be a Cooperating Agency on an Environmental Impact Statement for the  
proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida.

Dear Mr. Fellows:

The United States Coast Guard (USCG), in conjunction with Manatee County (County), is preparing an Environmental Impact Statement (EIS) for the proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida. In accordance with 40 CFR 1501.6, the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provision of the National Environmental Policy Act, we are requesting you be a Cooperating Agency on this environmental document. This request is based on your Regulatory Jurisdiction. Designation as a Cooperating Agency does not imply that your agency supports the proposed project.

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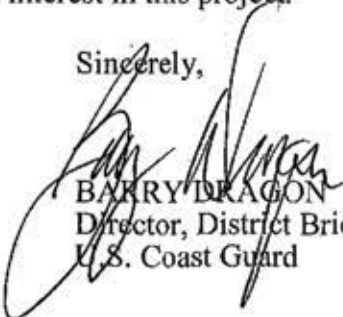
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Thank you for your cooperation and interest in this project.

Sincerely,



BARRY DRAGON  
Director, District Bridge Program  
U.S. Coast Guard

U.S. Department of  
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Commander (dpb)  
Seventh Coast Guard District

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1932  
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Col. Paul Grosskruger, District Engineer  
U.S. Army Corps of Engineers, Jacksonville District  
Regulatory Branch  
P.O. Box 4970  
Jacksonville, FL 32232-0019

Re: Invitation to be a Cooperating Agency on an Environmental Impact Statement for the  
proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida.

Dear Colonel Grosskruger:

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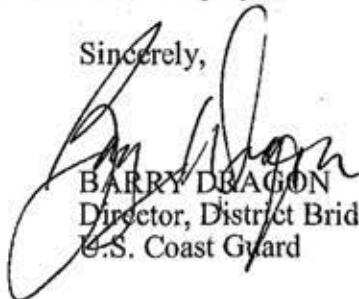
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Thank you for your cooperation and interest in this project.

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BARRY DRAGON  
Director, District Bridge Program  
U.S. Coast Guard



U.S. Department of  
Homeland Security

United States  
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Commander (dpb)  
Seventh Coast Guard District

909 SE 1st Ave (Suite 432)  
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16475/3889  
1932  
July 20, 2010

Ms. Jan Rogers  
Director  
U.S. Environmental Protection Agency  
Region 4 - South Florida Office Urban Outreach  
400 N. Congress Avenue, Suite 120  
West Palm Beach, FL 33401

Re: Invitation to be a Cooperating Agency on an Environmental Impact Statement for the  
proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida.

Dear Ms. Rogers:

The United States Coast Guard (USCG), in conjunction with Manatee County (County), is preparing an Environmental Impact Statement (EIS) for the proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida. In accordance with 40 CFR 1501.6, the Council on Environmental Quality's (CEQ) Regulations for Implementing the Procedural Provision of the National Environmental Policy Act, we are requesting you be a Cooperating Agency on this environmental document. This request is based on your Regulatory Jurisdiction. Designation as a Cooperating Agency does not imply that your agency supports the proposed project.

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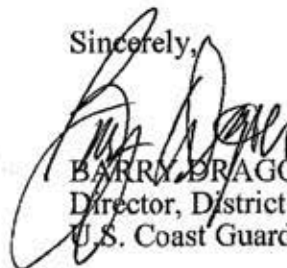
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BARRY DRAGON  
Director, District Bridge Program  
U.S. Coast Guard

U.S. Department of  
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Commander (dpb)  
Seventh Coast Guard District

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July 20, 2010

Mr. Tom Welborn  
Director  
U.S. Environmental Protection Agency  
Region 4 - South Florida Office  
61 Forsyth Street, SW  
Mail Code 9T25  
Atlanta, GA 30303-8960

Re: Invitation to be a Cooperating Agency on an Environmental Impact Statement for the  
proposed Fort Hamer Bridge across the Manatee River, Manatee County, Florida.

Dear Mr. Welborn:

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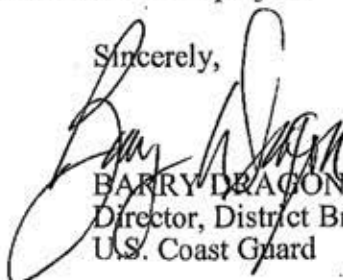
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Thank you for your cooperation and interest in this project.

Sincerely,



BARRY DRAGON  
Director, District Bridge Program  
U.S. Coast Guard



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Southeast Regional Office  
263 13<sup>th</sup> Avenue South  
St. Petersburg, Florida 33701-5505  
(727) 824-5317; FAX 824-5300

July 27, 2010 F/SER46:DR/mt

Barry Dragon  
Director, District Bridge Program  
United States Coast Guard  
Seventh Coast Guard District  
909 SE 1st Avenue, Suite 432  
Miami, Florida 33131-3050

Dear Mr. Dragon:

NOAA's National Marine Fisheries Service (NMFS) has received your letter inviting NMFS to be a cooperating agency on the Environmental Impact Statement for the proposed Fort Hamer Bridge across the Manatee River in Manatee County, Florida. While NMFS thanks you for the invitation to be a cooperating agency, we must decline the offer due to manpower limitations. We will have to limit our project activities to participation in conference calls, attending occasional meetings, conducting on-site field investigations, and review of relevant project documents. Thank you again for the invitation. We look forward to coordinating with the Coast Guard on this project.

If you have questions regarding our response please contact me at the letterhead address or by calling (727) 824-5379.

Sincerely,

David Rydene  
Fishery Biologist  
Habitat Conservation Division

cc:  
F/SER4  
F/SER46 - Rydene





DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
10117 PRINCESS PALM AVENUE, SUITE 120  
TAMPA, FLORIDA 33610

REPLY TO  
ATTENTION OF

July 29, 2010

Tampa Regulatory Office  
SAJ-2010-02223 (EIS-JPF)

Mr. Barry Dragon  
Director, District Bridge Program  
United States Coast Guard  
909 SE 1<sup>st</sup> Avenue (Suite 432)  
Miami, Florida 33131-3050

Dear Mr. Dragon:

This letter is written in reference to your correspondence dated July 20, 2010, in which you requested the United States Army Corps of Engineers (Corps) to become a cooperating agency during the review and preparation of the Environmental Impact Statement for the Fort Hamer Bridge across the Manatee River, Manatee County, Florida. The Corps agrees to become a cooperating agency with the United States Coast Guard.

The application has been assigned Corps file number SAJ-2010-02223, and the project has been assigned to John Fellows. Should you have any questions, please contact him at the letterhead address or by telephone (813) 769-7067, by fax (813) 769-7061 or by e-mail at John.P.Fellows@usace.army.mil.

The Corps' Jacksonville District Regulatory Division looks forward to working in tandem with your agency. Should you have any additional questions, please do not hesitate to contact me.

Sincerely,

  
Stephen R. Sullivan  
Chief, South Permits Branch

Copies furnished:  
RD  
File  
Randall Overton, USCG  
(Via electronic mail: randall.d.overton@uscg.mil)



# United States Department of the Interior

## U. S. FISH AND WILDLIFE SERVICE

7915 BAYMEADOWS WAY, SUITE 200  
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:

FWS Log No. 41910-2010-R-0397

August 24, 2010

Barry Dragon  
Director, District Bridge Program  
U.S. Coast Guard  
909 SE 1<sup>st</sup> Avenue (RM 432)  
Miami, FL 33187

Dear Mr. Dragon,


On July 20, 2010 our office received a request from the Office of Environmental Policy and Compliance to conduct an environmental review on the Notice of Intent to prepare an Environmental Impact Statement (EIS) for the proposed Fort Hamer Bridge over the Manatee River located in Manatee County, Florida.

To our knowledge, our office has not commented on this proposal through FDOT's Efficient Transportation Decision Making (ETDM) system online or in accordance with the section 7 consultation process under the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*)

Based on a cursory review of the study area we expect to have comments as this proposal progresses. Our environmental concerns are likely to include potential impacts to submerged aquatic vegetation (SAV) in the Manatee River as a result of the construction activities, the shading effects and the project footprint from a new bridge; impacts to Florida manatees during construction; impacts to unique freshwater marshes in the area; increased turbidity, sedimentation and nutrient loading in the Manatee River which is designated as an Outstanding Florida Waterway (OFW); contaminants entering the waterway from road run off; increased road kill; increased residential development and further fragmentation of wildlife habitat in a rural area; new connector roads, and/or road widening and hardening as an indirect result of a new bridge providing access to undeveloped areas.

We look forward to the opportunity to review the draft EIS as well as provide comments through the consultation process. Thank you for allowing us to comment early in the consultation process. We regret that we are unable to participate in the development of the EIS as a cooperating agency.

Sincerely,

  
David L. Hankla  
for Field Supervisor



September 20, 2010

Ms. MaryAnn Poole  
Director of the Office of Policy and Stakeholder Coordination  
Florida Fish and Wildlife Conservation Commission  
2574 Seagate Drive, Suite 250  
Tallahassee, FL 32399

**Re: Fort Hamer Bridge, Manatee County, Florida**  
**URS Project No.: 12009385**  
**Protected Species Information Request**  
**Township 34 South, Range 19 East, Sections 5, 8, 17, 19, 20, 29, and 30**

Dear Ms. Poole:

URS Corporation Southern has been contracted by Manatee County to prepare an Environmental Impact Statement (EIS) for a proposed bridge across the Manatee River at Fort Hamer Road. The study area extends along the Upper Manatee River Road on the south side of the river to Fort Hamer Road on the north side of the river, in Manatee County, Florida (see attached location map).

In 1999, this project was being proposed by the Florida Department of Transportation (FDOT), who prepared a Draft EIS for the project. During the EIS process, the Florida Fish and Wildlife Conservation Commission provided a letter, dated August 26, 1999, that indicated the Manatee River is a suspected birthing area for the West Indian manatee. A copy of the letter is attached to this letter for reference. In order to better assess potential impacts associated with the proposed project, we are asking for any pertinent and/or updated information on the Florida manatee and documented birthing/calves in the Manatee River within one mile of the project area shown on the attached map.

We appreciate your assistance with this request. If you have any questions, need additional information, or would like to discuss this request, please call me at (813) 675-6631 or email me at [Terry\\_Cartwright@URSCorp.com](mailto:Terry_Cartwright@URSCorp.com).

Sincerely,

**URS Corporation Southern**



Terry Cartwright

Enclosure

cc: Daren Carriere, URS

URS Corporation  
7650 West Courtney  
Campbell Causeway  
Tampa, FL 33607-1462  
Tel: 813.286.1711  
Fax: 813.287.8591



**From:** [Richards, Anne](#)  
**To:** [Terry\\_Cartwright@urscorp.com](mailto:Terry_Cartwright@urscorp.com)  
**Subject:** Fort Hammer Bridge information request  
**Date:** 09/24/2010 02:06 PM

---

Hi Terry,

We received your request regarding information about manatee use of the Manatee River. Below are links to FWRI's website where data and other information pertaining to manatees is available:

<http://research.myfwc.com/features/default.asp?id=1001>

<http://research.myfwc.com/manatees/>

Please contact us if you have additional questions.

Anne

**Anne Richards**

Environmental Specialist  
Fish and Wildlife Conservation Commission  
Imperiled Species Management Section  
620 South Meridian St. 6A  
Tallahassee, FL 32399  
Phone: 850-528-1309  
Fax: 850-922-4338  
[anne.richards@myfwc.com](mailto:anne.richards@myfwc.com)

**From:** [Richards, Anne](#)  
**To:** [Terry\\_Cartwright@URSCorp.com](mailto:Terry_Cartwright@URSCorp.com)  
**Subject:** RE: Fort Hammer Bridge information request  
**Date:** 09/24/2010 03:40 PM  
**Attachments:** [Westcoast Telemetry Request form.pdf](#)

---

We get that kind of information from a number of sources, such as observations logged during aerial surveys, telemetry data that tracks the movements of parts of the population and mortality data. Telemetry data is available by request and I've attached a form for that. Mortality data is available at the links I supplied. I will forward the most recent aerial survey data for area in another email.

---

**From:** Terry\_Cartwright@URSCorp.com [mailto:Terry\_Cartwright@URSCorp.com]  
**Sent:** Friday, September 24, 2010 2:39 PM  
**To:** Richards, Anne  
**Subject:** Re: Fort Hammer Bridge information request

Good afternoon Anne -

Thanks for FWR1 links. I added them to my favorites for future use. Do you have any other specific data regarding the Manatee River being used as a manatee nursery? The FWC comments from 1999 indicated that the Manatee River may be a birthing area. We are trying to get all of the available information FWC may have on this issue so we don't miss anything in our review.

Thanks.

Terry Cartwright  
Environmental Scientist  
URS Corporation  
7650 W. Courtney Campbell Causeway  
Tampa, FL 33607-1462  
Phone: (813) 286-1711, ext. 6631  
Direct: 813-675-6631  
Fax: (813) 286-6587

This e-mail and any attachments contain URS Corporation confidential information that may be proprietary or privileged. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the e-mail and any attachments or copies.

▼ "Richards, Anne" <anne.richards@MyFWC.com>

"Richards, Anne"  
<anne.richards@MyFWC.com>

To "Terry\_Cartwright@urscorp.com"  
<Terry\_Cartwright@urscorp.com>

cc

Subject Fort Hammer Bridge information request

09/24/2010 02:05 PM

Hi Terry,

We received your request regarding information about manatee use of the Manatee River. Below are links to FWRI's website where data and other information pertaining to manatees is available:

<http://research.myfwc.com/features/default.asp?id=1001>

<http://research.myfwc.com/manatees/>

Please contact us if you have additional questions.

Anne

**Anne Richards**

Environmental Specialist  
Fish and Wildlife Conservation Commission  
Imperiled Species Management Section  
620 South Meridian St. 6A  
Tallahassee, FL 32399  
Phone: 850-528-1309  
Fax: 850-922-4338  
[anne.richards@myfwc.com](mailto:anne.richards@myfwc.com)



**From:** [Richards, Anne](#)  
**To:** [Terry\\_Cartwright@URSCorp.com](mailto:Terry_Cartwright@URSCorp.com)  
**Subject:** FW: Manatee County aerial survey data 1985-86  
**Date:** 09/24/2010 03:54 PM  
**Attachments:** [Manatee\\_1985\\_1986\\_FWC\\_40Flights.dbf](#)  
[Manatee\\_1985\\_1986\\_FWC\\_40Flights.prj](#)  
[Manatee\\_1985\\_1986\\_FWC\\_40Flights.sbn](#)  
[Manatee\\_1985\\_1986\\_FWC\\_40Flights.sbx](#)  
[Manatee\\_1985\\_1986\\_FWC\\_40Flights.shp](#)  
[Manatee\\_1985\\_1986\\_FWC\\_40Flights.shx](#)  
[Manatee\\_Path\\_1985\\_1986\\_FWC.dbf](#)  
[Manatee\\_Path\\_1985\\_1986\\_FWC.prj](#)  
[Manatee\\_Path\\_1985\\_1986\\_FWC.sbn](#)  
[Manatee\\_Path\\_1985\\_1986\\_FWC.sbx](#)  
[Manatee\\_Path\\_1985\\_1986\\_FWC.shp](#)  
[Manatee\\_Path\\_1985\\_1986\\_FWC.shx](#)  
[WR\\_MMR\\_Manatee\\_DistributionSurvey\\_NManatee.htm](#)

---

Terry,

This is earlier GIS data for Manatee County aerial surveys. The shapefile is attached, along with the flight path. This survey was from May 1985-Dec 1986 and had 40 flights. **Metadata** for this data set is also attached as: WR\_MMR\_Manatee\_DistributionSurvey\_NManatee.htm

Anne

**Anne Richards**

Environmental Specialist  
Fish and Wildlife Conservation Commission  
Imperiled Species Management Section  
620 South Meridian St. 6A  
Tallahassee, FL 32399  
Phone: 850-528-1309  
Fax: 850-922-4338  
[anne.richards@myfwc.com](mailto:anne.richards@myfwc.com)

**From:** [Richards, Anne](#)  
**To:** [Terry\\_Cartwright@URSCorp.com](mailto:Terry_Cartwright@URSCorp.com)  
**Subject:** FW: Manatee County Aerial Survey Data 2005-2008  
**Date:** 09/24/2010 03:44 PM  
**Attachments:** [manatee\\_county\\_flightpath.sbx](#)  
[manatee\\_county\\_flightpath.shp](#)  
[manatee\\_county\\_flightpath.shx](#)  
[manatee\\_county\\_flightpath.dbf](#)  
[manatee\\_county\\_flightpath.prj](#)  
[manatee\\_county\\_flightpath.sbn](#)  
[Manatee\\_July2005\\_Sept2008\\_Mote\\_62Flights.sbn](#)  
[Manatee\\_July2005\\_Sept2008\\_Mote\\_62Flights.sbx](#)  
[Manatee\\_July2005\\_Sept2008\\_Mote\\_62Flights.shp](#)  
[Manatee\\_July2005\\_Sept2008\\_Mote\\_62Flights.shx](#)  
[Manatee\\_July2005\\_Sept2008\\_Mote\\_62Flights.dbf](#)  
[Manatee\\_July2005\\_Sept2008\\_Mote\\_62Flights.prj](#)  
[ManateeAerialSurvey\\_Mote\\_Manatee2005to2008\\_Metadata.pdf](#)

---

Terry,

The Manatee County aerial survey data attached is in GIS format. A shapefile is attached, along with the flight path. This survey was conducted from July 2005-Sept 2008 and had 62 flights. **Metadata** for this data set is also attached.

Anne

**Anne Richards**

Environmental Specialist  
Fish and Wildlife Conservation Commission  
Imperiled Species Management Section  
620 South Meridian St. 6A  
Tallahassee, FL 32399  
Phone: 850-528-1309  
Fax: 850-922-4338  
[anne.richards@myfwc.com](mailto:anne.richards@myfwc.com)

**From:** [Richards, Anne](#)  
**To:** [Terry\\_Cartwright@URSCorp.com](mailto:Terry_Cartwright@URSCorp.com)  
**Subject:** FW: Tampa Bay area aerial survey data 1987-1994  
**Date:** 09/24/2010 04:02 PM  
**Attachments:** [TampaBay\\_Path\\_1987\\_1994\\_FWC.shx](#)  
[TampaBay\\_1987\\_1994\\_FWC\\_88Flights\\_One2dayFlight.dbf](#)  
[TampaBay\\_1987\\_1994\\_FWC\\_88Flights\\_One2dayFlight.prj](#)  
[TampaBay\\_1987\\_1994\\_FWC\\_88Flights\\_One2dayFlight.sbn](#)  
[TampaBay\\_1987\\_1994\\_FWC\\_88Flights\\_One2dayFlight.sbx](#)  
[TampaBay\\_1987\\_1994\\_FWC\\_88Flights\\_One2dayFlight.shp](#)  
[TampaBay\\_1987\\_1994\\_FWC\\_88Flights\\_One2dayFlight.shx](#)  
[TampaBay\\_Path\\_1987\\_1994\\_FWC.dbf](#)  
[TampaBay\\_Path\\_1987\\_1994\\_FWC.prj](#)  
[TampaBay\\_Path\\_1987\\_1994\\_FWC.sbn](#)  
[TampaBay\\_Path\\_1987\\_1994\\_FWC.sbx](#)  
[TampaBay\\_Path\\_1987\\_1994\\_FWC.shp](#)  
[WR\\_MMR\\_Manatee\\_DistributionSurvey\\_TampaBay.htm](#)

---

The Manatee County aerial survey data shapefile is attached, along with the flight path.

This survey was from Nov 1987 – May 1994 and had 88 flights.

**Metadata** for this data set is also attached as:

[WR\\_MMR\\_Manatee\\_DistributionSurvey\\_TampaBay.htm](#)

**From:** [Richards, Anne](#)  
**To:** [Terry\\_Cartwright@URSCorp.com](mailto:Terry_Cartwright@URSCorp.com)  
**Subject:** FW: Tampa Bay area aerial survey data 1995-97  
**Date:** 09/24/2010 04:02 PM  
**Attachments:** [WR\\_MMR\\_Manatee\\_DistributionSurvey\\_TampaBay#2.htm](#)  
[TampaBay\\_1995\\_1997\\_FWC\\_33Flights.dbf](#)  
[TampaBay\\_1995\\_1997\\_FWC\\_33Flights.prj](#)  
[TampaBay\\_1995\\_1997\\_FWC\\_33Flights.sbn](#)  
[TampaBay\\_1995\\_1997\\_FWC\\_33Flights.sbx](#)  
[TampaBay\\_1995\\_1997\\_FWC\\_33Flights.shp](#)  
[TampaBay\\_1995\\_1997\\_FWC\\_33Flights.shx](#)

---

The Manatee County aerial survey data shapefile is attached.  
This survey was from Jan 1995 – June 1997 and had 33 flights.

**Metadata** for this data set is also attached as:

[WR\\_MMR\\_Manatee\\_DistributionSurvey\\_TampaBay#2.htm](#)

Fort Hamer Bridge DEIS  
Biological Assessment

---

**Appendix B**  
*FNAI Information*





1018 Thomasville Road  
Suite 200-C  
Tallahassee, FL 32303  
850-224-8207  
fax 850-681-9364  
www.fnai.org

Terry Cartwright  
URS Corporation  
7650 West Courtney Campbell Causeway  
Tampa, FL 33607

March 16, 2011

Dear Terry,

Thank you for requesting information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

**Project:** Fort Hamer Bridge Site  
**Date Received:** 03/11/2011  
**Location:** Manatee County

#### Element Occurrences

A search of our maps and database indicates that currently we have several element occurrences mapped within the vicinity of the study area (see enclosed map and element occurrence table). Please be advised that a lack of element occurrences in the FNAI database is not a sufficient indication of the absence of rare or endangered species on a site.

No documented wood stork occurrences exist within 15 miles of the project site. However, potential wood stork habitat and species-unspecific bird rookeries do exist within this region. (See attached maps.)

*The element occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates that some element occurrences occur in the general vicinity of the label point. This may be due to lack of precision of the source data, or an element that occurs over an extended area (such as a wide ranging species or large natural community). For animals and plants, element occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations which may no longer be extant. Extirpated element occurrences will be marked with an 'X' following the occurrence label on the enclosed map.*

*Several of the species and natural communities tracked by the Inventory are considered **data sensitive**. Occurrence records for these elements contain information that we consider sensitive due to collection pressures, extreme rarity, or at the request of the source of the information. The Element Occurrence Record has been labeled "Data Sensitive." We request that you not publish or release specific locational data about these species or communities without consent from the Inventory. If you have any questions concerning this please do not hesitate to call.*

#### Likely and Potential Rare Species

In addition to documented occurrences, other rare species and natural communities may be identified on or near the site based on habitat models and species range models (see enclosed Biodiversity Matrix Report). These species should be taken into consideration in field surveys, land management, and impact avoidance and mitigation.



Florida Resources  
and Environmental  
Analysis Center

Institute of Science  
and Public Affairs

The Florida State University

*Tracking Florida's Biodiversity*

*FNAI habitat models indicate areas, which based on land cover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Habitat models have been developed for approximately 300 of the rarest species tracked by the Inventory, including all federally listed species.*

*FNAI species range models indicate areas that are within the known or predicted range of a species, based on climate variables, soils, vegetation, and/or slope. Species range models have been developed for approximately 340 species, including all federally listed species.*

*The FNAI Biodiversity Matrix Geodatabase compiles Documented, Likely, and Potential species and natural communities for each square mile Matrix Unit statewide.*

### **Florida Scrub-jay Survey – U.S. Fish and Wildlife Service**

This survey was conducted by staff and associates of the Archbold Biological Station from 1992 to 1996. An attempt was made to record all scrub-jay (*Aphelocoma coerulescens*) groups, although most federal lands were not officially surveyed. Each map point represents one or more groups.

This data layer indicates that there are potential scrub-jay populations near your site. For additional information:

Fitzpatrick, J.W., B. Pranty, and B. Stith, 1994, Florida scrub jay statewide map, 1992-1993. U. S. Fish and Wildlife Service Report, Cooperative Agreement no. 14-16-004-91-950.

### **Managed Areas**

Portions of the site appear to be located within the Rye Wilderness Park, managed by Manatee County.

*The Managed Areas data layer shows public and privately managed conservation lands throughout the state. Federal, state, local, and privately managed conservation lands are included.*

The Inventory always recommends that professionals familiar with Florida's flora and fauna conduct a site-specific survey to determine the current presence or absence of rare, threatened, or endangered species.

Please visit [www.fnai.org/trackinglist.cfm](http://www.fnai.org/trackinglist.cfm) for county or statewide element occurrence distributions and links to more element information.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. An invoice will be mailed separately. If I can be of further assistance, please give me a call at (850) 224-8207.

Sincerely,

*Michael O'Brien*

Michael O'Brien  
Data Services Analyst

Encl








*Tracking Florida's Biodiversity*




1018 Thomasville Road  
Suite 200-C  
Tallahassee, FL 32303  
(850) 224-8207  
(850) 681-9364 Fax  
[www.fnai.org](http://www.fnai.org)

FLORIDA  
*Natural Areas*  
INVENTORY


### Element Occurrences



-  Animals  
 Plants  
 Communities  
 Other  
 Data Sensitive  
 Point Indicates General Vicinity of Element  
 U.S. Fish & Wildlife Service  
 Scrub Jay Survey 1992-96

### Conservation Lands

- 
 Federal  
 State  
 Local  
 Private  
 State Aquatic Preserves

### Land Acquisition Projects

- 
- Florida Forever
- 
- Board of Trustees Projects

-  FNAI Rare Species Habitat  
 FNAI Biodiversity Matrix Square Mile Units

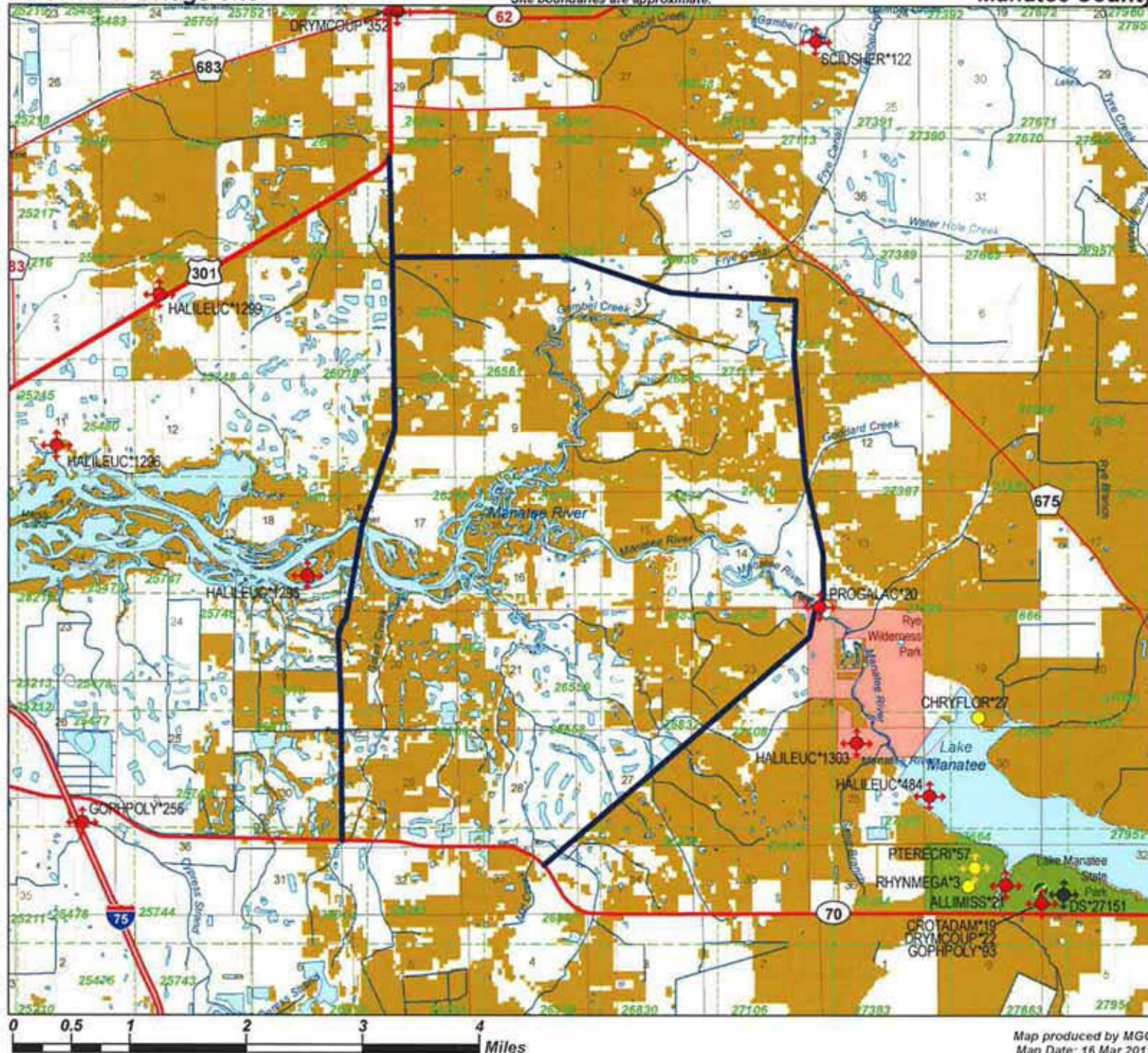
-  County Boundary  
 Interstate  
 Turnpike  
 Major Highway  
 Local Road  
 Railroad [Inactive railroads shown in Gray]  
 Water

**NOTE**  
Map should not be interpreted without  
accompanying documents.

### Fort Hamer Bridge Site

Site boundaries are approximate.

**Manatee County**



Map produced by MGO  
Map Date: 16 Mar 2011





1018 Thomasville Road  
Suite 200-C  
Tallahassee, FL 32303  
(850) 224-8207  
(850) 681-9364 Fax  
www.fnai.org

# FLORIDA Natural Areas INVENTORY

## Element Occurrences

- Wood Stork Occurrence (Rookery and/or Foraging)
- ⊕ Bird Rookery
- ⊕ Point Indicates General Vicinity of Element

■ Wood Stork, *Mycteria americana*, Potential Habitat (Core Foraging Areas)

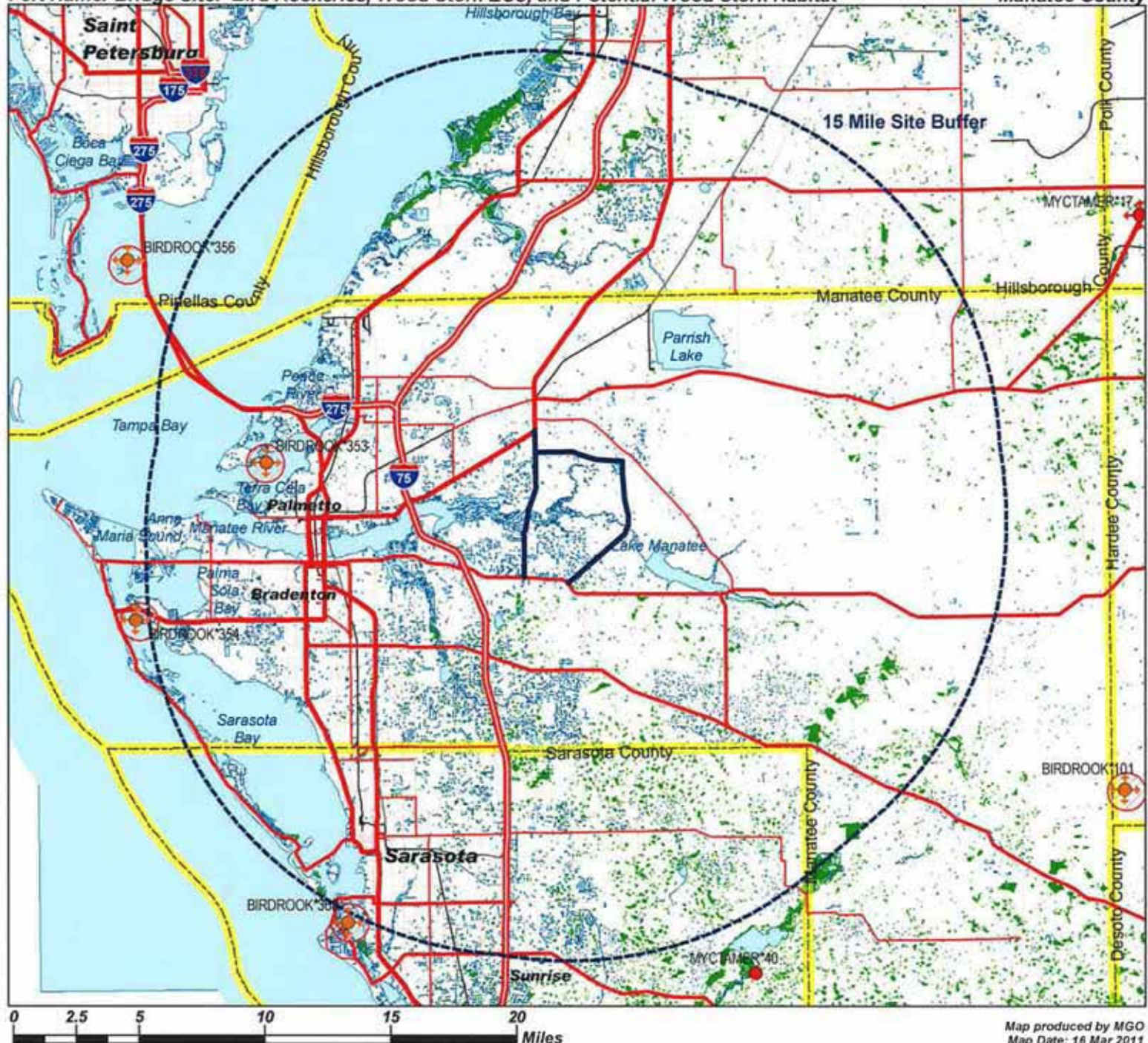
- County Boundary
- Interstate
- Turnpike
- Major Highway
- Water

## NOTE

Map should not be interpreted without accompanying documents.

## Fort Hamer Bridge Site: Bird Rookeries, Wood Stork EOs, and Potential Wood Stork Habitat

Manatee County



0 2.5 5 10 15 20 Miles

Map produced by MGO  
Map Date: 16 Mar 2011





1018 Thomasville Road  
Suite 200-C  
Tallahassee, FL 32303  
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(850) 681-9364 Fax  
www.fnai.org

FLORIDA  
Natural Areas  
INVENTORY

## Florida Natural Areas Inventory

### ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR Fort Hamer Bridge Site



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
ALLMISS*21	<i>Alligator mississippiensis</i>	American Alligator	G5	S4	SAT	FT(S/A)	1984	ALONG LAKE SHORE.	NO POPULATION ESTIMATE, BUT REGULARLY SEEN (P84ALV01).
CHRYFLOR*27	<i>Chrysopsis floridana</i>	Florida Goldenaster	G1	S1	LE	LE	1988-01-06	1988-01-06: Open edge of old xeric oak area, invaded by <i>Paspalum notatum</i> (S88DELSFFLUS; A02DEL01FLUS).	1988-01-06: Plants present on site (S88DELSFFLUS; A02DEL01FLUS).
CROTADAM*19	<i>Crotalus adamanteus</i>	Eastern Diamondback Rattlesnake	G4	S3	N	N	1992-09-25	1990-01-04: Flatwoods (U94FPS01FLUS).	1992-09-25 - 1990-01-04: four snakes observed between Jan. 4, 1990 and Sept. 25, 1992. 1992-09-25: Kempton observed snake crossing dam into park on Sept. 25, 1992. Snake was ca. 5 ft. long and 9" in diameter. 1992-06: snake observ
DRYMCoup*22	<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT	1983	1984-PRE: OBSERVED IN SCRUB AND SANDHILL AREAS (PNDALV01FLUS, U83DRP01FLUS).	1984-PRE: NO POPULATION ESTIMATE, BUT REGULARLY SEEN IN PARK (PNDALV01FLUS, U83DRP01FLUS).
DRYMCoup*352	<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT	1971-08-07	No general description given	MUSEUM SPECIMEN: G. WOOLFENDEN, 7 AUG 1971 (USF).
DS*27151	<i>Data Sensitive Element</i>	Data Sensitive	G1	S1	LE	LE	2009-12-21	Data Sensitive	Data Sensitive
GOPHPOLY*256	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST	1987-PRE	No general description given	1987-pre: dead on road (U86DIE01FLUS).
GOPHPOLY*93	<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST	1984	IN SAND PINE SCRUB AND SANDHILLS.	NO POPULATION ESTIMATE, BUT AT LEAST SEVERAL ACTIVE BURROWS (P84ALV01).
HALILEUC*1295	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	2005-07-12: Source does not provide a description.	Nest status: Active, 2003, 2002, 2001, 2000, 1999;(U03FWC01FLUS)
HALILEUC*1296	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	2005-07-12: Source does not provide a description.	Nest status: Active, 2003, 2002, 2001, 2000, 1999;(U03FWC01FLUS)
HALILEUC*1299	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	2005-07-12: Source does not provide a description.	Nest status: Active, 2003, 2002, 2001; Unknown status or not assessed, 2000, 1999;(U03FWC01FLUS)
HALILEUC*1303	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	2003	2005-07-12: Source does not provide a description.	Nest status: Active, 2003, 2002; Unknown status or not assessed, 2001, 2000, 1999;(U03FWC01FLUS)





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## Florida Natural Areas Inventory

### ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR Fort Hamer Bridge Site



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
HALILEUC*484	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N	1990	No general description given	Nest status 1999-2003: Unknown/not assessed - 2003, 2002, 2001, 2000, 1999; Status 1995-98: Unknown/not assessed - 1998, 1997, 1996, 1995; (U03FWC01FLUS). Previous data (note different format) NEST: 1991: DESTROYED; 1990: PRODUCTIVITY UNKNOWN; 1989: INAC
PROGALAC*20	<i>Progomphus alachuensis</i>	Tawny Sanddragon	G3	S3	N	N	1982-05-03	1982-05-03: No description given (U09DEP01FLUS).	1982-05-03: Staff from the Florida Department of Environmental Protection collected this species on this date and on the following dates: 1981-05-05, 1981-04-06 (U09DEP01FLUS).
PTERECRI*57	<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT	2000-08-27	2000-08-27: This population inhabits a good quality scrub habitat characterized by <i>Pinus clausa</i> in the overstory and a shrubby understory comprised of <i>Serenoa repens</i> , <i>Quercus geminata</i> , <i>Quercus myrtifolia</i> , and <i>Licania michauxii</i> . Principal herbs include <i>Ar</i>	2000-08-27: A population of 7 plants (71% flowering) found with marginal vigor in scrub habitat(U03SCH03FLUS).
RHYNMEGA*3	<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE	1993-07-30	1993-07-30: VERY LOCALIZED IN FREQUENTLY BURNED SANDY OPENINGS IN SCRUBBY FLATWOODS; POMELLO SOILS (ARENIC HAPLAQUODS) (A00BRI01FLUS).	1993-07-30: NONE GIVEN (A00BRI01FLUS).
SCIUSHER*122	<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC	1988-05-10	Flatwoods pasture; small islands of Sandhill in general vicinity, but none closer than 0.5 mile.	1988-05-10: B.A. Millsap, GFC, observed 1 adult female in flatwoods pasture.



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## Florida Natural Areas Inventory

### ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR Fort Hamer Bridge Site: Bird Rookery and Wood Stork Information



Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
BIRDROOK*101	Bird Rookery		GNR	SNR	N	N	1988-05-24	COLONY SITE IS WILLOWHEAD & MARSHY POND SURROUNDED BY FRESHWATER MARSH & PASTURE LAND. NESTS ARE IN MEDIUM HEIGHT SHRUBS (MOSTLY DEAD) OVER WATER. >0.8 KM FROM HUMANS (U82NES01).	MULTI-SPECIES ROOKERY, 9 SPECIES. 11-100 BIRDS 1978-07, 101-250 BIRDS 1988-04-07, 11-100 BIRDS 1988-05-24 (FIRST SURVEY), >1000 BIRDS 1988-05-24 (SECOND SURVEY). GREAT EGRET PRESENT 1978, 1988-04-07, 1988-05-24; SNOWY EGRET PRESENT 1988-05-24; LITTLE BLU
BIRDROOK*353	Bird Rookery		GNR	SNR	N	N	1989	Colony site is non-barrier coastal island; habitat surrounding colony is water; nesting substrate is mangroves over high ground (U82NES01).	Multi-species rookery, 15 species. 751-1,000 birds 1976-04, >5,000 birds 1976-06, 501-750 birds 1977-04, >1,000 birds 1978-04 and 1978-07, Brown Pelican present 1987-04-26 (no estimate of abundance), >1,000 birds 1987 (date not specified), 501-750 birds
BIRDROOK*354	Bird Rookery		GNR	SNR	N	N	1989	Colony site is non-barrier coastal island; habitat surrounding colony is water; nesting substrate is mangroves over water.	Multi-species rookery, 11 species. 501-750 birds 1976-04, 251-500 birds 1976-06, >1,000 birds 1977-04, 501-750 birds 1978-04, 101-250 birds 1978-07, Brown Pelican present 1987-04-26 (no estimate of abundance), 501-750 birds 1987 (date not specified), >1
BIRDROOK*356	Bird Rookery		GNR	SNR	N	N	1989-04-26	Colony site is non-barrier coastal island; habitat surrounding colony is water; nesting substrate is mangroves over high ground (U82NES01).	Multi-species rookery, 10 species. 251-500 birds 1976-04, 11-100 birds 1976-06, 751-1,000 birds 1977-04 and 1978-04, 101-250 birds 1978-07, Brown Pelican present 1987-04-26 (no estimate of abundance), >5,000 birds 1988-04-21, Brown Pelican present 1989-0
BIRDROOK*368	Bird Rookery		GNR	SNR	N	N	1989-04-26	Colony site is coastal spoil island surrounded by water; nesting substrate is mangroves over high ground (U82NES01).	Multi-species rookery, 7 species. 501-750 birds 1976-06, 11-100 birds 1977-04, 251-500 birds 1978-04, 101-250 birds 1978-07, Brown Pelican present 1987-04-26 but no estimate of abundance, 501-750 birds 1988-04-07, 751-1,000 birds 1988-04-27, Brown Pelica
MYCTAMER*17	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE	1976-04	WATER IMPOUNDMENT SURROUNDED BY DEAD TREES; NESTING IN DEAD TREES OVER WATER; HUMAN DISTURBANCE <0.8 KM.	1976-04: 4 NESTING PAIRS; ABSENT 1978-04, 1977-04 (COLONY EMPTY), 1976-06.



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## Florida Natural Areas Inventory

### ELEMENT OCCURRENCES DOCUMENTED ON OR NEAR Fort Hamer Bridge Site: Bird Rookery and Wood Stork Information



Map Label	Scientific Name	Common Name	Global State Federal State Observation					Date	Description	EO Comments
			Rank	Rank	Status	Listing				
MYCTAMER*40	<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE		1989-02-10	SHALLOW, OPEN POOL WITHIN FW MARSH ADJACENT TO PARK ROAD.	3 WOODSTORKS OBSERVED FEEDING.



# Florida Natural Areas Inventory

## Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<b>Matrix Unit ID: 26014</b>					
<b>Likely</b>					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
<b>Potential</b>					
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecrinata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospira megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT
<b>Matrix Unit ID: 26015</b>					
<b>Likely</b>					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<b>Potential</b>					
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecrinata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospira megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT
<b>Matrix Unit ID: 26016</b>					
<b>Likely</b>					
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Trichechus manatus</i>	Manatee	G2	S2	LE	FE
<b>Potential</b>					
<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2	S2	LT	FT

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## Florida Natural Areas Inventory

### Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Dendroica discolor paludicola</i>	Florida Prairie Warbler	G5T3	S3	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eragrostis pectinacea var. tracyi</i>	Sanibel Lovegrass	G5T1	S1	N	LE
<i>Eretmochelys imbricata</i>	Hawksbill	G3	S1	LE	FE
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rallus longirostris scottii</i>	Florida Clapper Rail	G5T3?	S3?	N	N
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

Matrix Unit ID: 26017

#### Documented

<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N
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#### Likely

<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Trichechus manatus</i>	Manatee	G2	S2	LE	FE

#### Potential

<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2	S2	LT	FT
<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Charadrius melodus</i>	Piping Plover	G3	S2	LT	FT
<i>Dendroica discolor paludicola</i>	Florida Prairie Warbler	G5T3	S3	N	N
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Eragrostis pectinacea var. tracyi</i>	Sanibel Lovegrass	G5T1	S1	N	LE
<i>Eretmochelys imbricata</i>	Hawksbill	G3	S1	LE	FE
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rallus longirostris scottii</i>	Florida Clapper Rail	G5T3?	S3?	N	N
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE

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Potential - This site lies within the known or predicted range of the species listed.



# Florida Natural Areas Inventory

## Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<b>Matrix Unit ID: 26288</b>					
<b>Likely</b>					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
<i>Trichechus manatus</i>	Manatee	G2	S2	LE	FE
<b>Potential</b>					
<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2	S2	LT	FT
<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Charadrius melodus</i>	Piping Plover	G3	S2	LT	FT
<i>Chrysopsis floridana</i>	Florida Goldenaster	G1	S1	LE	LE
<i>Dendroica discolor paludicola</i>	Florida Prairie Warbler	G5T3	S3	N	N
<i>Eragrostis pectinacea var. tracyi</i>	Sanibel Lovegrass	G5T1	S1	N	LE
<i>Eretmochelys imbricata</i>	Hawksbill	G3	S1	LE	FE
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Matelea floridana</i>	Florida Spiny-pod	G2	S2	N	LE
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rallus longirostris scottii</i>	Florida Clapper Rail	G5T3?	S3?	N	N
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

**Matrix Unit ID: 26289**

### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Trichechus manatus</i>	Manatee	G2	S2	LE	FE

### Potential

<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE

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Potential - This site lies within the known or predicted range of the species listed.

## Florida Natural Areas Inventory

### Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Pteroglossaspis ecrinata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

#### Matrix Unit ID: 26290

##### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST

##### Potential

<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecrinata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

#### Matrix Unit ID: 26291

##### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
Mesic flatwoods		G4	S4	N	N

##### Potential

<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecrinata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

#### Matrix Unit ID: 26557

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# Florida Natural Areas Inventory

## Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<b>Likely</b>					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE
<b>Potential</b>					
<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Chrysopsis floridana</i>	Florida Goldenaster	G1	S1	LE	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Panicum abscissum</i>	Cutthroat Grass	G3	S3	N	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

### Matrix Unit ID: 26558

#### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N

#### Potential

<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

### Matrix Unit ID: 26562

#### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N

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# Florida Natural Areas Inventory

## Biodiversity Matrix Report



Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing
<i>Trichechus manatus</i>	Manatee	G2	S2	LE	FE
<b>Potential</b>					
<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Chrysopsis floridana</i>	Florida Goldenaster	G1	S1	LE	LE
<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	N	N
<i>Dendroica discolor paludicola</i>	Florida Prairie Warbler	G5T3	S3	N	N
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

### Matrix Unit ID: 26832

#### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N

#### Potential

<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

### Matrix Unit ID: 26836

#### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
Mesic flatwoods		G4	S4	N	N

#### Potential

<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE

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## Florida Natural Areas Inventory

### Biodiversity Matrix Report



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<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Chrysopsis floridana</i>	Florida Goldenaster	G1	S1	LE	LE
<i>Dendroica discolor paludicola</i>	Florida Prairie Warbler	G5T3	S3	N	N
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Trichechus manatus</i>	Manatee	G2	S2	LE	FE
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

Matrix Unit ID: 27108

#### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
<i>Mycteria americana</i>	Wood Stork	G4	S2	LE	FE

#### Potential

<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Aphelocoma coerulescens</i>	Florida Scrub-jay	G2	S2	LT	FT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Chrysopsis floridana</i>	Florida Goldenaster	G1	S1	LE	LE
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Heterodon simus</i>	Southern Hognose Snake	G2	S2	N	N
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Panicum abscissum</i>	Cutthroat Grass	G3	S3	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Schizachyrium niveum</i>	Scrub Bluestem	G1G2	S1S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

Matrix Unit ID: 27109

#### Documented-Historic

<i>Progomphus alachuensis</i>	Tawny Sanddragon	G3	S3	N	N
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# Florida Natural Areas Inventory

## Biodiversity Matrix Report



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<b>Likely</b>					
<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N
Scrub		G2	S2	N	N
<b>Potential</b>					
<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2	S2	LT	FT
<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Aphelocoma coerulescens</i>	Florida Scrub-jay	G2	S2	LT	FT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Chrysopsis floridana</i>	Florida Goldenaster	G1	S1	LE	LE
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Schizachyrium niveum</i>	Scrub Bluestem	G1G2	S1S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrily	G2G3	S2S3	N	LT

Matrix Unit ID: 27110

### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N

### Potential

<i>Acipenser oxyrinchus desotoi</i>	Gulf Sturgeon	G3T2	S2	LT	FT
<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Aphelocoma coerulescens</i>	Florida Scrub-jay	G2	S2	LT	FT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Chrysopsis floridana</i>	Florida Goldenaster	G1	S1	LE	LE
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Panicum abscissum</i>	Cutthroat Grass	G3	S3	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT

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# Florida Natural Areas Inventory

## Biodiversity Matrix Report



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<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Schizachyrium niveum</i>	Scrub Bluestem	G1G2	S1S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

Matrix Unit ID: 27111

### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N

### Potential

<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Chrysopsis floridana</i>	Florida Goldenaster	G1	S1	LE	LE
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N
<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Panicum abscissum</i>	Cutthroat Grass	G3	S3	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Pteroglossaspis ecrinata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

Matrix Unit ID: 27112

### Likely

<i>Drymarchon couperi</i>	Eastern Indigo Snake	G3	S3	LT	FT
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	G5T2T3	S2S3	N	ST
Mesic flatwoods		G4	S4	N	N

### Potential

<i>Andropogon arctatus</i>	Pine-woods Bluestem	G3	S3	N	LT
<i>Athene cunicularia floridana</i>	Florida Burrowing Owl	G4T3	S3	N	SSC
<i>Bonamia grandiflora</i>	Florida Bonamia	G3	S3	LT	LE
<i>Calopogon multiflorus</i>	Many-flowered Grass-pink	G2G3	S2S3	N	LE
<i>Centrosema arenicola</i>	Sand Butterfly Pea	G2Q	S2	N	LE
<i>Chrysopsis floridana</i>	Florida Goldenaster	G1	S1	LE	LE
<i>Eumops floridanus</i>	Florida bonneted bat	G1	S1	C	ST
<i>Gopherus polyphemus</i>	Gopher Tortoise	G3	S3	N	ST
<i>Lechea cernua</i>	Nodding Pinweed	G3	S3	N	LT
<i>Mustela frenata peninsulæ</i>	Florida Long-tailed Weasel	G5T3	S3	N	N

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## Florida Natural Areas Inventory

### Biodiversity Matrix Report



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<i>Nemastylis floridana</i>	Celestial Lily	G2	S2	N	LE
<i>Panicum abscissum</i>	Cutthroat Grass	G3	S3	N	LE
<i>Podomys floridanus</i>	Florida Mouse	G3	S3	N	SSC
<i>Pteroglossaspis ecristata</i>	Giant Orchid	G2G3	S2	N	LT
<i>Rana capito</i>	Gopher Frog	G3	S3	N	SSC
<i>Rhynchospora megaplumosa</i>	Large-plumed Beaksedge	G2	S2	N	LE
<i>Sciurus niger shermani</i>	Sherman's Fox Squirrel	G5T3	S3	N	SSC
<i>Zephyranthes simpsonii</i>	Redmargin Zephyrlily	G2G3	S2S3	N	LT

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## Florida Natural Areas Inventory

### Managed Area Summary Rye Wilderness Park



SCIENTIFIC NAME	COMMON NAME	Global Rank	State Rank	Federal Status	State Listing
<b>BIRDS</b>					
<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3	N	N
<b>INVERTEBRATES</b>					
<i>Progomphus alachuensis</i>	Tawny Sanddragon	G3	S3	N	N

**Note:** Summary includes all occurrence records currently in the FNAI database.



## Elements and Element Occurrences

An **element** is any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature.

An **element occurrence (EO)** is an area of land and/or water in which a species or natural community is, or was, present. An EO should have practical conservation value for the Element as evidenced by potential continued (or historical) presence and/or regular recurrence at a given location.

## Element Ranking and Legal Status

Using a ranking system developed by NatureServe and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks for each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element Occurrences (EOs), estimated abundance (number of individuals for species; area for natural communities), geographic range, estimated number of adequately protected EOs, relative threat of destruction, and ecological fragility.

### FNAI GLOBAL ELEMENT RANK

- G1** = Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- G2** = Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- G3** = Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- G4** = Apparently secure globally (may be rare in parts of range).
- G5** = Demonstrably secure globally.
- GH** = Of historical occurrence throughout its range, may be rediscovered (e.g., Ivory-billed woodpecker).
- GX** = Believed to be extinct throughout range.
- GXC** = Extirpated from the wild but still known from captivity or cultivation.
- G#?** = Tentative rank (e.g., G2?).
- G#G#** = Range of rank; insufficient data to assign specific global rank (e.g., G2G3).
- G#T#** = Rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1).
- G#Q** = Rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q).
- G#T#Q** = Same as above, but validity as subspecies or variety is questioned.
- GU** = Unrankable; due to a lack of information no rank or range can be assigned (e.g., GUT2).
- GNA** = Ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- GNR** = Element not yet ranked (temporary).
- GNRTNR** = Neither the element nor the taxonomic subgroup has yet been ranked.

### FNAI STATE ELEMENT RANK

- S1** = Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
- S2** = Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
- S3** = Either very rare and local in Florida (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction from other factors.
- S4** = Apparently secure in Florida (may be rare in parts of range).
- S5** = Demonstrably secure in Florida.
- SH** = Of historical occurrence in Florida, possibly extirpated, but may be rediscovered (e.g., Ivory-billed woodpecker).
- SX** = Believed to be extirpated throughout Florida.
- SU** = Unrankable; due to a lack of information no rank or range can be assigned.
- SNA** = State ranking is not applicable because the element is not a suitable target for conservation (e.g. a hybrid species).
- SNR** = Element not yet ranked (temporary).

## **FEDERAL LEGAL STATUS**

Legal status information provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant federal agency.

Definitions derived from U.S. Endangered Species Act of 1973, Sec. 3. Note that the federal status given by FNAI refers only to Florida populations and that federal status may differ elsewhere.

**C** = Candidate species for which federal listing agencies have sufficient information on biological vulnerability and threats to support proposing to list the species as Endangered or Threatened.  
**LE** = Endangered: species in danger of extinction throughout all or a significant portion of its range.  
**LE, LT** = Species currently listed endangered in a portion of its range but only listed as threatened in other areas  
**LE, PDL** = Species currently listed endangered but has been proposed for delisting.  
**LE, PT** = Species currently listed endangered but has been proposed for listing as threatened.  
**LE, XN** = Species currently listed endangered but tracked population is a non-essential experimental population.  
**LT** = Threatened: species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range.  
**SAT** = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.  
**SC** = Not currently listed, but considered a "species of concern" to USFWS.

## **STATE LEGAL STATUS**

Provided by FNAI for information only. For official definitions and lists of protected species, consult the relevant state agency.

**Animals:** Definitions derived from "Florida's Endangered Species and Species of Special Concern, Official Lists" published by Florida Fish and Wildlife Conservation Commission, 1 August 1997, and subsequent updates.

**FE** = Listed as Endangered Species at the Federal level by the U. S. Fish and Wildlife Service  
**FT** = Listed as Threatened Species at the Federal level by the U. S. Fish and Wildlife Service  
**F(XN)** = Federal listed as an experimental population in Florida  
**FT(S/A)** = Federal Threatened due to similarity of appearance  
**ST** = State population listed as Threatened by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future. (ST\* for *Ursus americanus floridanus* (Florida black bear) indicates that this status does not apply in Baker and Columbia counties and in the Apalachicola National Forest. ST\* for *Neovison vison* pop.1 (Southern mink, South Florida population) indicates that this status applies to the Everglades population only.)  
**SSC** = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species. (SSC\* indicates that a species has SSC status only in selected portions of its range in Florida. SSC\* for *Pandion haliaetus* (Osprey) indicates that this status applies in Monroe county only.)  
**N** = Not currently listed, nor currently being considered for listing.

**Plants:** Definitions derived from Sections 581.011 and 581.185(2), Florida Statutes, and the Preservation of Native Flora of Florida Act, SB-40.001. FNAI does not track all state-regulated plant species; for a complete list of state-regulated plant species, call Florida Division of Plant Industry, 352-372-3505 or see: <http://www.doacs.state.fl.us/pi/>.

**LE** = Endangered: species of plants native to Florida that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue; includes all species determined to be endangered or threatened pursuant to the U.S. Endangered Species Act.  
**LT** = Threatened: species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in number as to cause them to be Endangered.  
**N** = Not currently listed, nor currently being considered for listing.

## Element Occurrence Ranking

FNAI ranks of quality of the element occurrence in terms of its viability (EORANK). Viability is estimated using a combination of factors that contribute to continued survival of the element at the location. Among these are the size of the EO, general condition of the EO at the site, and the conditions of the landscape surrounding the EO (e.g. an immediate threat to an EO by local development pressure could lower an EO rank).

**A** = Excellent estimated viability  
**A?** = Possibly excellent estimated viability  
**AB** = Excellent or good estimated viability  
**AC** = Excellent, good, or fair estimated viability  
**B** = Good estimated viability  
**B?** = Possibly good estimated viability  
**BC** = Good or fair estimated viability  
**BD** = Good, fair, or poor estimated viability  
**C** = Fair estimated viability  
**C?** = Possibly fair estimated viability  
**CD** = Fair or poor estimated viability  
**D** = Poor estimated viability  
**D?** = Possibly poor estimated viability  
**E** = Verified extant (viability not assessed)  
**F** = Failed to find  
**H** = Historical  
**NR** = Not ranked, a placeholder when an EO is not (yet) ranked.  
**U** = Unrankable  
**X** = Extirpated

\*For additional detail on the above ranks see: <http://www.natureserve.org/explorer/eorankguide.htm>

FNAI also uses the following EO ranks:

**H?** = Possibly historical  
**F?** = Possibly failed to find  
**X?** = Possibly extirpated

The following offers further explanation of the H and X ranks as they are used by FNAI:

The rank of H is used when there is a lack of recent field information verifying the continued existence of an EO, such as (a) when an EO is based only on historical collections data; or (b) when an EO was ranked A, B, C, D, or E at one time and is later, without field survey work, considered to be possibly extirpated due to general habitat loss or degradation of the environment in the area. This definition of the H rank is dependent on an interpretation of what constitutes "recent" field information. Generally, if there is no known survey of an EO within the last 20 to 40 years, it should be assigned an H rank. While these time frames represent suggested maximum limits, the actual time period for historical EOs may vary according to the biology of the element and the specific landscape context of each occurrence (including anthropogenic alteration of the environment). Thus, an H rank may be assigned to an EO before the maximum time frames have lapsed. Occurrences that have not been surveyed for periods exceeding these time frames should not be ranked A, B, C, or D. The higher maximum limit for plants and communities (i.e., ranging from 20 to 40 years) is based upon the assumption that occurrences of these elements generally have the potential to persist at a given location for longer periods of time. This greater potential is a reflection of plant biology and community dynamics. However, landscape factors must also be considered. Thus, areas with more anthropogenic impacts on the environment (e.g., development) will be at the lower end of the range, and less-impacted areas will be at the higher end.

The rank of X is assigned to EOs for which there is documented destruction of habitat or environment, or persuasive evidence of eradication based on adequate survey (i.e., thorough or repeated survey efforts by one or more experienced observers at times and under conditions appropriate for the Element at that location).





Technical Assistance Provided by:

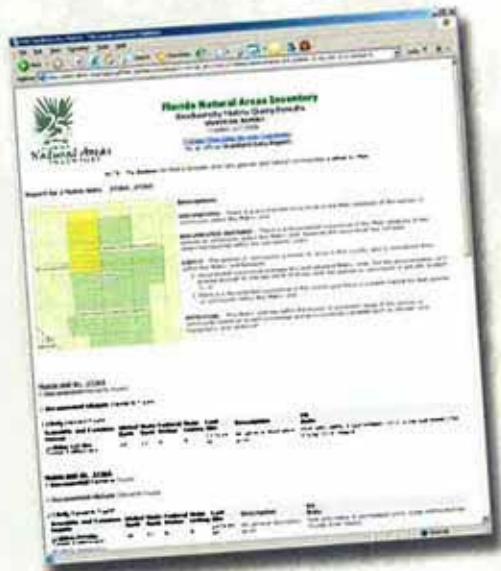


FOR IMMEDIATE RELEASE

## FNAI's Biodiversity Matrix Online



The Biodiversity Matrix Map Server is a new **screening tool** from FNAI that provides **immediate, free access** to rare species occurrence information statewide. This tool allows you to zoom to your site of interest and create a report listing documented, likely, and potential occurrences of rare species and natural communities.



The FNAI Biodiversity Matrix offers **built-in interpretation** of the likelihood of species occurrence for each 1-square-mile Matrix Unit across the state. The report includes a site map and list of species and natural communities by occurrence status: Documented, Documented-Historic, Likely, and Potential.

Try it today:

[www.fnai.org/biointro.cfm](http://www.fnai.org/biointro.cfm)

Please note: FNAI will continue to offer our Standard Data Report service as always. The Standard Data Report offers the most comprehensive information available on rare species, natural communities, conservation lands, and other natural resources.

[www.fnai.org](http://www.fnai.org)



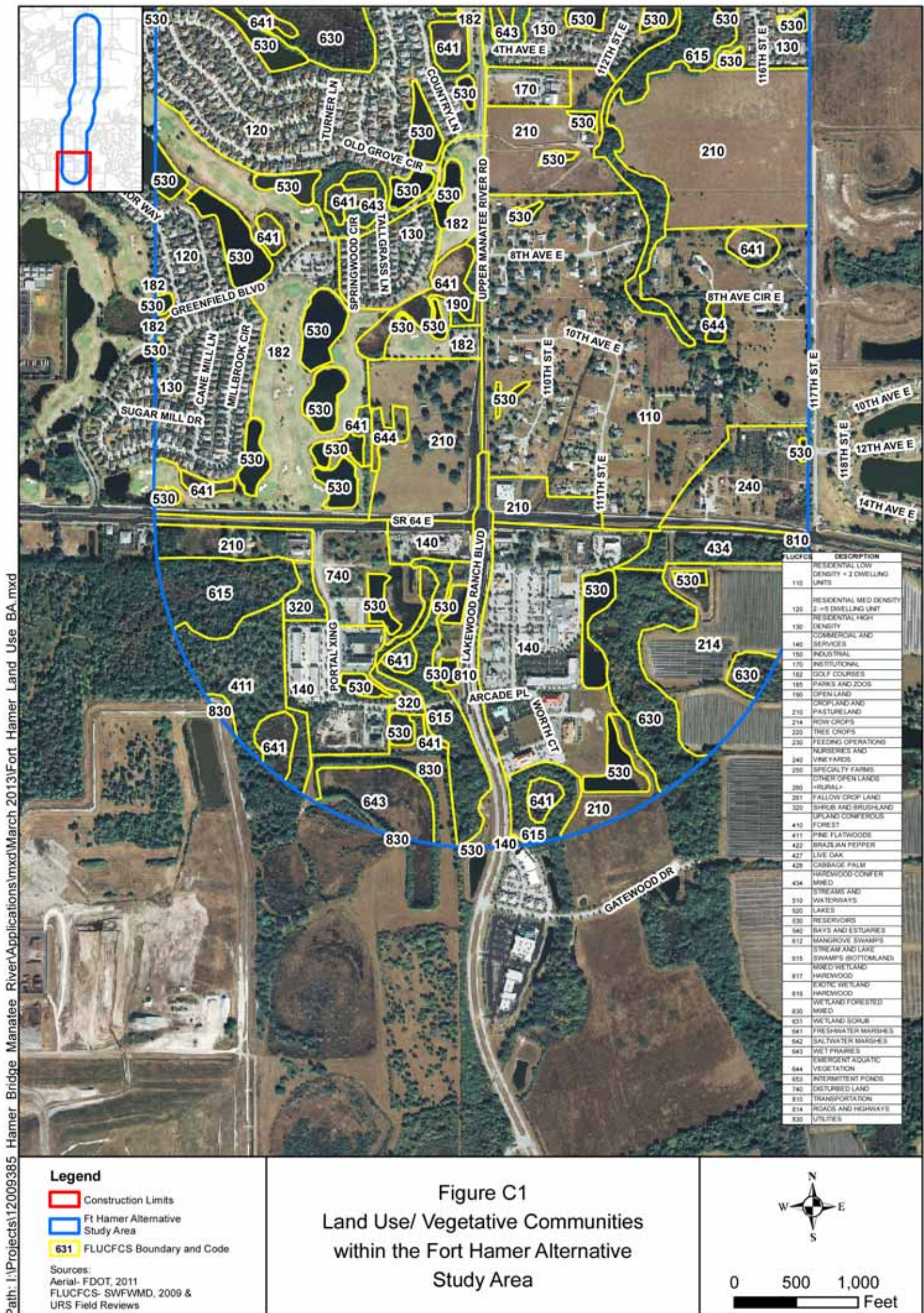
Fort Hamer Bridge DEIS  
Biological Assessment

**Appendix C**

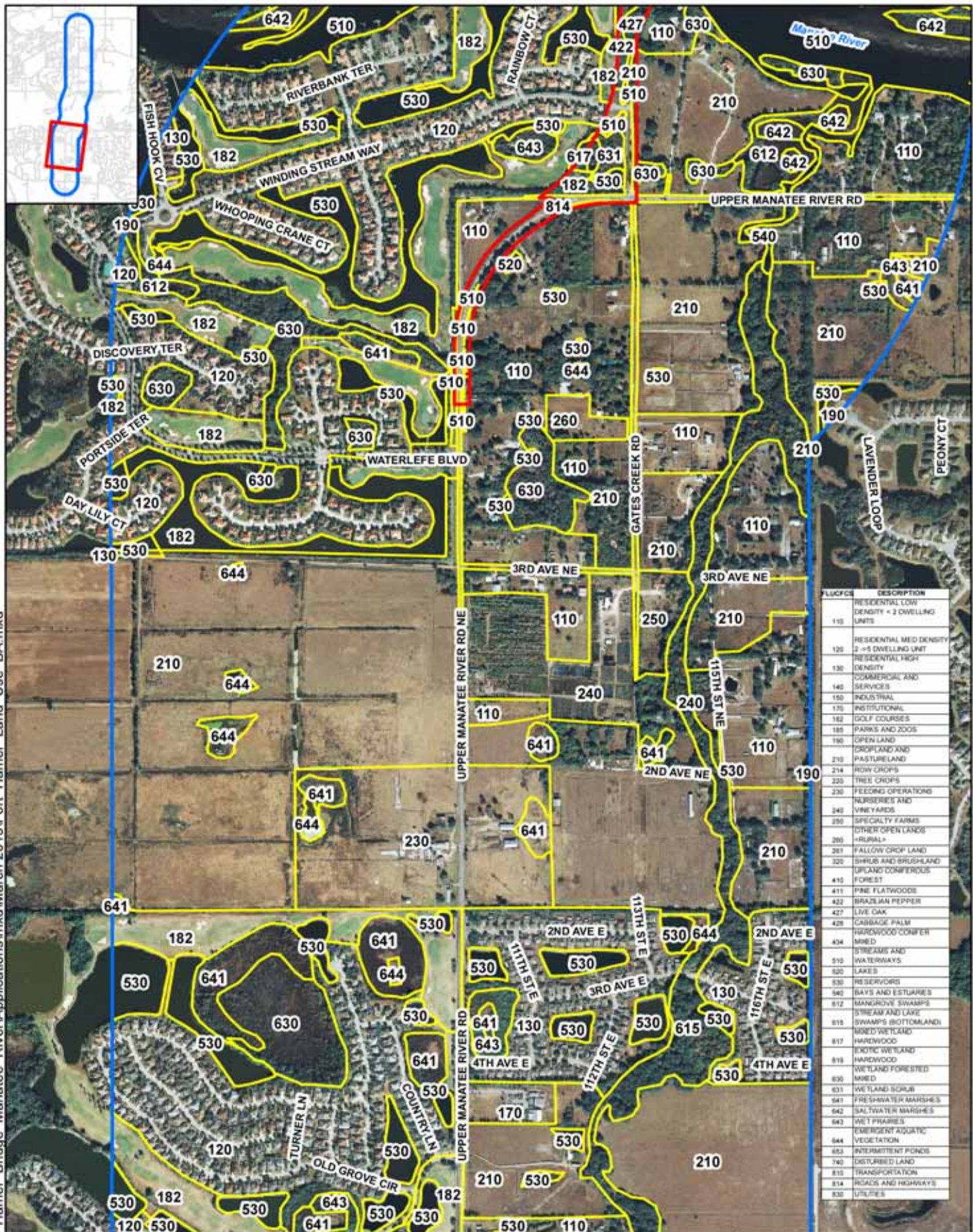
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*Land Use/Vegetative Communities within the Fort Hamer  
Alternative Study Area (Figures C1 through C5)*









### Legend

- Construction Limits
- Ft. Hamer Alternative Study Area
- 631 FLUCFCS Boundary and Code

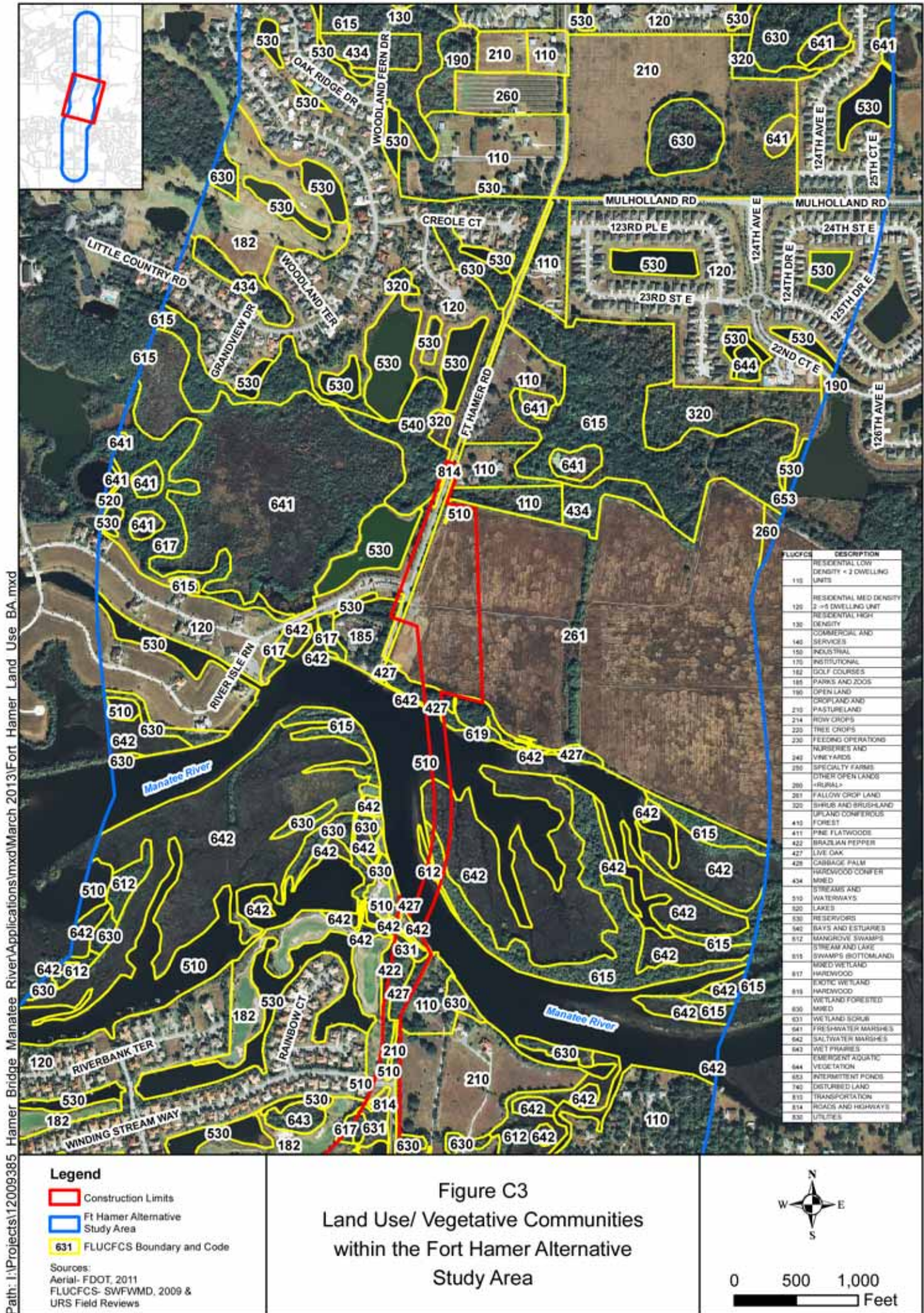
Sources:  
Aerial- FDOT, 2011  
FLUCFCS- SWFWMD, 2009 &  
URS Field Reviews

Figure C2  
Land Use/ Vegetative Communities  
within the Fort Hamer Alternative  
Study Area



0 500 1,000  
Feet















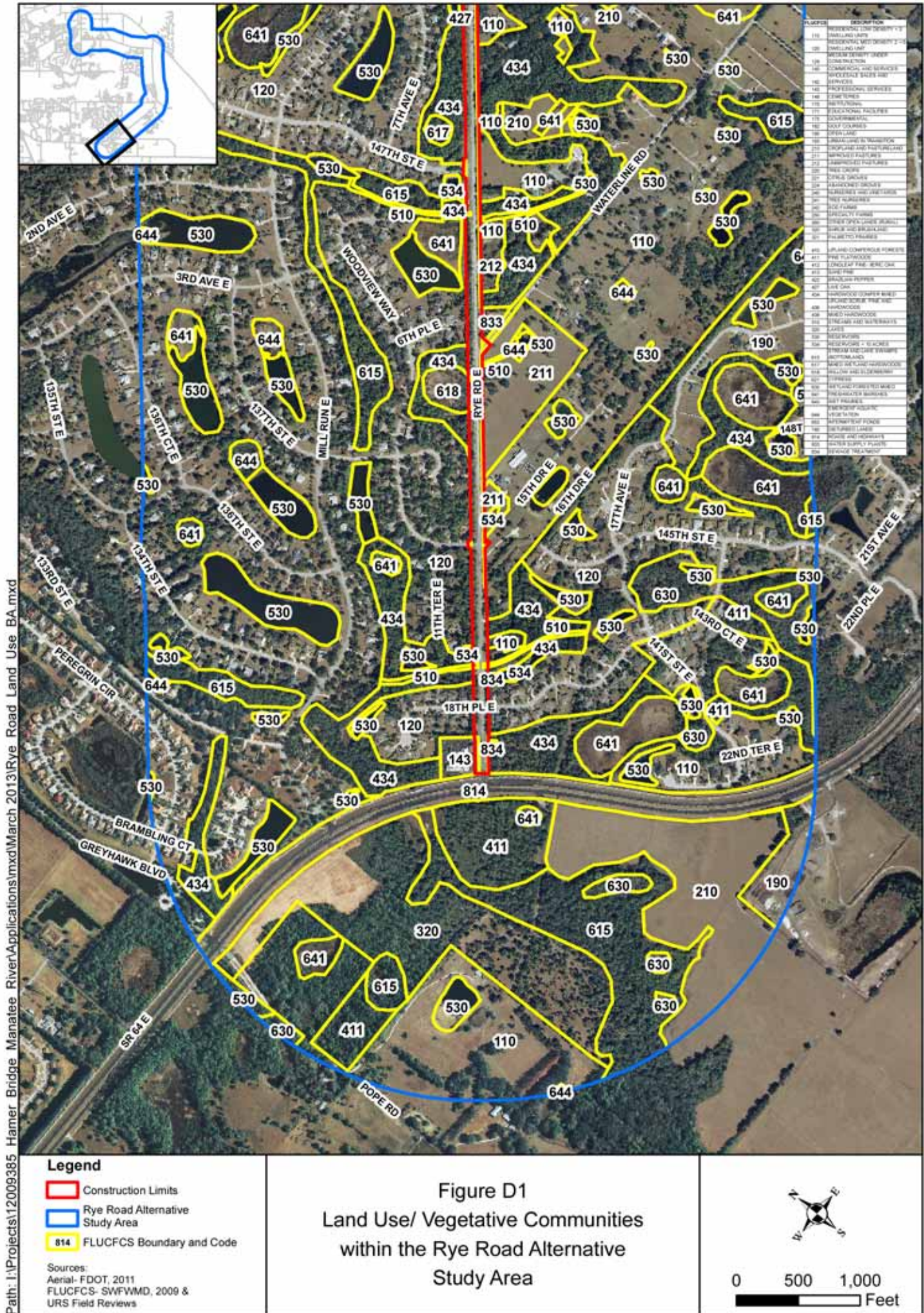
Fort Hamer Bridge DEIS  
Biological Assessment

**Appendix D**

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*Land Use/Vegetative Communities within the Rye Road  
Alternative Study Area (Figures D1 through D8)*





Path: I:\Projects\12009395 Hamer Bridge Manatee River\Applications\mxd\March 2013\Rye Road Land Use BA.mxd































Fort Hamer Bridge DEIS  
Biological Assessment

**Appendix E**

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*Standard Protection Measures for the Eastern Indigo Snake*



## STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE

1. An eastern indigo snake protection/education plan shall be developed by the applicant or requestor for all construction personnel to follow. The plan shall be provided to the Service for review and approval at least 30 days prior to any clearing activities. The educational materials for the plan may consist of a combination of posters, videos, pamphlets, and lectures (*e.g.*, an observer trained to identify eastern indigo snakes could use the protection/education plan to instruct construction personnel before any clearing activities occur). Informational signs should be posted throughout the construction site and along any proposed access road to contain the following information:
  - a. a description of the eastern indigo snake, its habits, and protection under Federal Law;
  - b. instructions not to injure, harm, harass or kill this species;
  - c. directions to cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site on its own before resuming clearing; and,
  - d. telephone numbers of pertinent agencies to be contacted if a dead eastern indigo snake is encountered. The dead specimen should be thoroughly soaked in water and then frozen.
2. If not currently authorized through an Incidental Take Statement in association with a Biological Opinion, only individuals who have been either authorized by a section 10(a)(1)(A) permit issued by the Service, or by the State of Florida through the Florida Fish Wildlife Conservation Commission (FWC) for such activities, are permitted to come in contact with an eastern indigo snake.
3. An eastern indigo snake monitoring report must be submitted to the appropriate Florida Field Office within 60 days of the conclusion of clearing phases. The report should be submitted whether or not eastern indigo snakes are observed. The report should contain the following information:
  - a. any sightings of eastern indigo snakes and
  - b. other obligations required by the Florida Fish and Wildlife Conservation Commission, as stipulated in the permit.

Revised February 12, 2004

Fort Hamer Bridge DEIS  
Biological Assessment

**Appendix F**

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*Standard Manatee Conditions for In-Water Work*

## STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

2009

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-FWCC. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida.
- f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Awareness signs that have already been approved for this use by the Florida Fish and Wildlife Conservation Commission (FWC) must be used (see MyFWC.com). One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8 1/2" by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities.



# CAUTION: MANATEE HABITAT

**All project vessels**

**IDLE SPEED / NO WAKE**

When a manatee is within 50 feet of work  
all in-water activities must

**SHUT DOWN**

Report any collision with or injury to a manatee:



**Wildlife Alert:**

**1-888-404-FWCC(3922)**

cell \*FWC or #FWC